15¢ A COPY

The OIL WEEKLY

Exclusively Devoted To The Production and Transportation of Oil and Gas

Engineering News Statistics

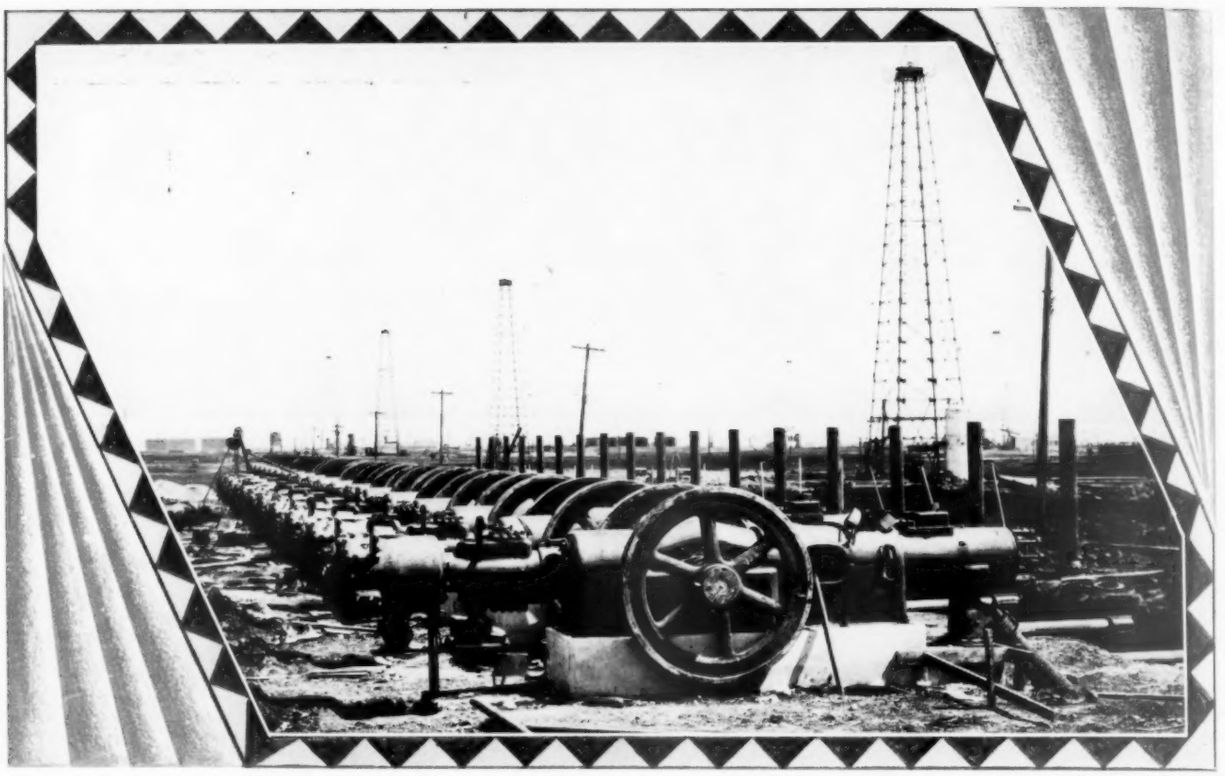
July 25, 1930 Volume 58. No. 6

HUGHES tools

ROCK BITS
CONES
TOOL JOINTS
CORE BITS
VALVES and
FITTINGS

Manufactured by
HUGHES TOOL COMPANY
Main Office and Plant
HOUSTON, TEXAS

AMBASSADORS
OF
PERFORMANCE



Clarks on the Firing Line Will Repulse High Costs

Improvements pioneered and developed by Clark have given "Super 2s" efficiency equalling the very best 4-cycle machines—while retaining 2-cycle simplicity. That is why you see CLARKS in so many new plants. . . . Shown above are 100 horse power "Super 2s" in an Indian Territory Illuminating Oil Company plant at Oklahoma City, Oklahoma.

CLARK

» » » » CLARK BROS. COMPANY, OLEAN, N. Y. « « « «

California: Smith, Booth, Usher Company, 228 S. Central Ave., Los Angeles

Export Office: 150 Broadway New York, N. Y.

Mid-Continent Sales Offices: Tulsa and Fort Worth

Warehouses: Tulsa; McCamey and Sweetwater, Texas; Artesia, N. M.

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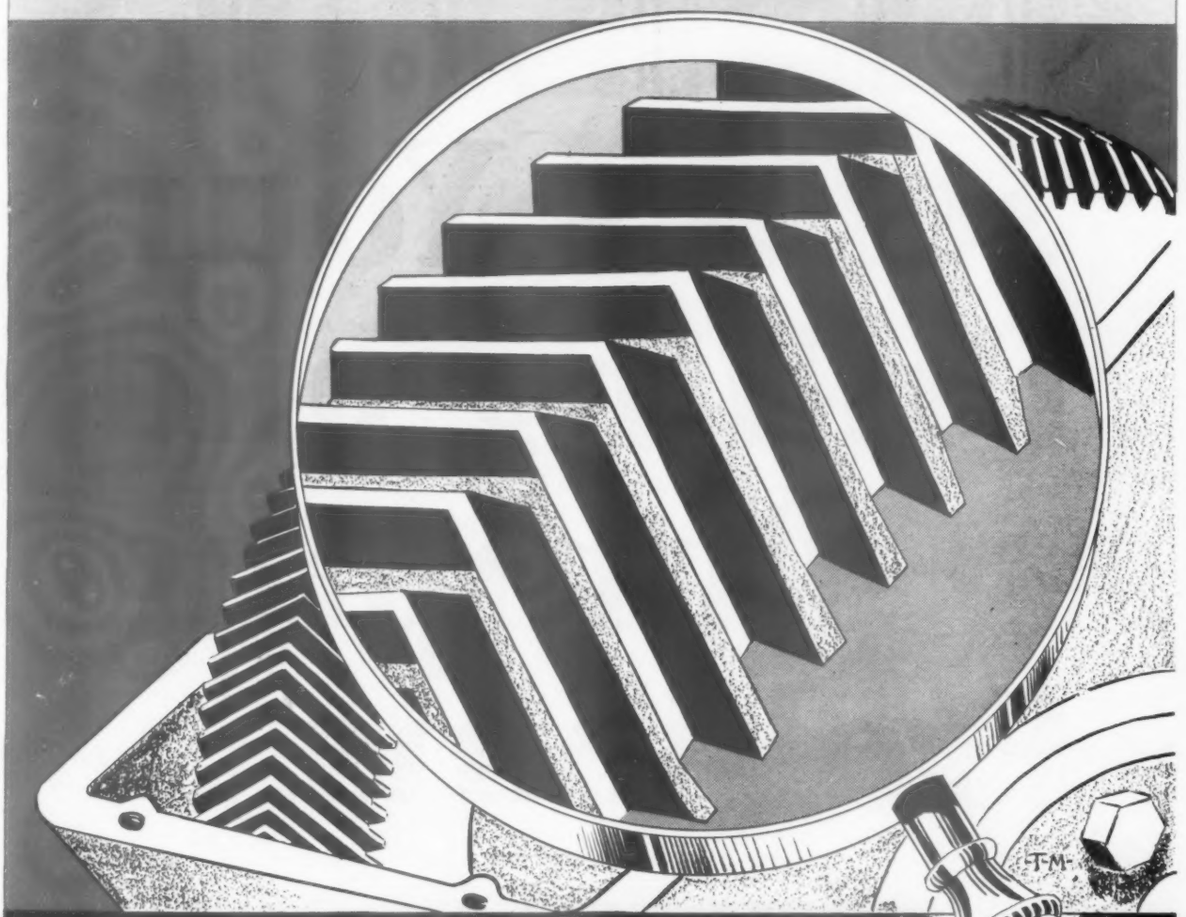
GASO PUMPS INVITE THE CLOSEST INSPECTION



Close inspection of Gaso Pumps reveals features which are reassuring to the purchaser—correct design in accordance with the most advanced engineering principles—materials carefully selected for suitability and quality—workmanship of an accuracy made possible only by a combination of complete mechanical facilities and workmen especially trained to Gaso standards of precision. Gaso Pumps are built exclusively for the industry which is so crammed with action that conditions of usage are often severe in the extreme. And these pumps are built to deliver pleasing service in spite of the excessive demands to which they are subject.

Send your requirements for full information regarding Gaso Pumps to meet any oil industry need.

GASO PUMP & BURNER MFG. COMPANY, Tulsa, Okla.
Dallas, Texas New York, N. Y.

GASO PUMPS

for every oil industry need

IDECO

Solves Your Drilling and ---Pumping Problems. . .

And **IDECO** *has never been successfully imitated*

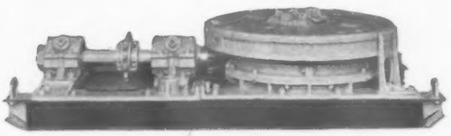
The International Derrick

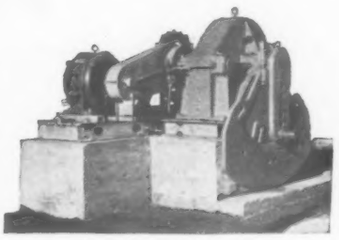
Columbus, Ohio Beaumont,

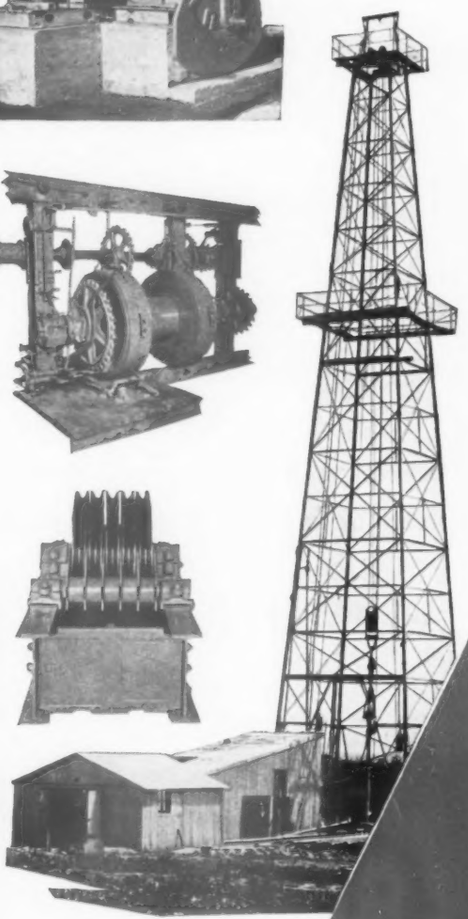
The Mark that stands for Satisfactory Service

Plants:—Columbus, Marietta, Delaware, Ohio; Torrance, California; Pittsburgh, Pennsylvania; Wichita, Kansas; Tulsa, Oklahoma; Shreveport,
Warehouses and Stocks:—Columbus, Delaware, Ohio; Seminole, Tonkawa, El Dorado, Wichita Heights, McPherson, Kansas; Houston, Beaumont, Grand Saline, Seguin, Hebbronville, Texas; Lake Charles, Shreveport, Torrance, California; Hobbs, New Mexico.

Export Offices:—90 West Street, New York City; Columbus,







"IDECO" does not offer its experiments to the oil producer. Every piece of equipment is field tested before its announcement to the trade. As a result, the annoying little details of improper assembly are eliminated. We *know* exactly what performance records may be expected.

Back of these field tests is an engineering and metallurgical research division of Ideco. In our laboratories are studied and analyzed the steels from which Ideco products can be made. The best steel for the purpose is selected. Then comes the mechanical engineer with his facts on stresses and strains. *But the resulting product goes to the field for actual test.*

Ideco's position of leadership, therefore, is due to its exact knowledge of what will best meet oil production problems. In derricks, we believed the "Ideco" design of galvanized structural steel answered the question. Time has proven this correct—in length of service, all-round economy and ease of handling. In drilling and pumping equipment there is a steadily growing acceptance of the Ideco idea, i.e., to study your problem, Research it, Engineer it and then field test it. Only when we have proven the product the best for your service, can you have it.

& Equipment Company

Texas Los Angeles, Cal.

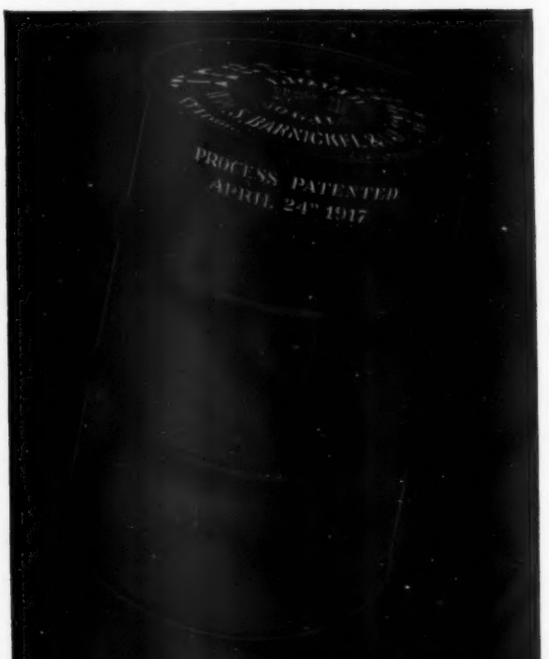
Beaumont, Houston, Texas. *District Offices:*—New York City, N. Y.; Louisiana; Fort Worth, Beaumont, Texas; Maracaibo, Venezuela. Drumright, Okemah, Maud, Sasakwa, Allen, Oklahoma City, Oklahoma; Big Spring, Odessa, Pyote, Pampa, Borger, Mexia, Luling, Wichita Falls, Zwolle, Louisiana; Smackover, El Dorado, Arkansas; Bakersfield, Taft,

Ohio; Houston, Texas; Los Angeles, California.

The Mark that stands for Satisfactory Service

721

THE ARRIVAL of the Tret-O-litE representative on any lease marks the end of worry, waste or undue expense caused by "cut oil" or "B. S." . . . . . He brings the unequalled field and laboratory experience of an organization that has solved thousands of "cut oil" problems—and that has recovered millions of barrels of oil at minimum cost.


PROCESS PATENTED
APRIL 24th 1917
Use our experience without cost to you
WM. S. BARNICKEL & COMPANY
ST. LOUIS, MO.
Offices and Plant: Webster Groves, St. Louis County, Mo.

Tret-O-litE

Reg. U. S. Pat. Off.

FAST DELIVERY

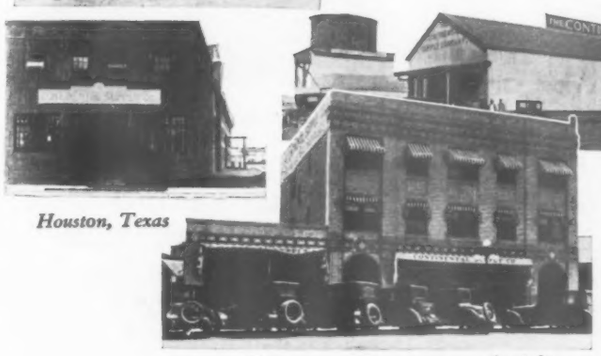
ON

WESTCOTT VALVES

CARRIED IN STOCK AT ALL CONTINENTAL STORES

Kevin, Montana

McCamey, Texas



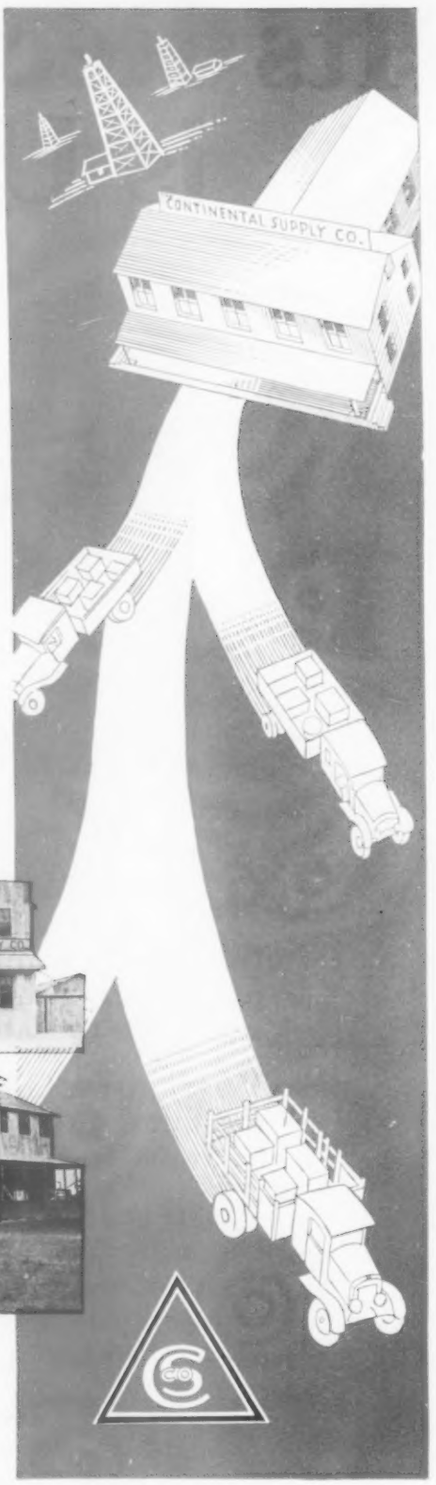
Houston, Texas

Above
Casper, Wyoming

At right
Hebbronville, Texas

Pyote, Texas

Above are shown a few of more than seventy Continental Stores that carry stocks of Westcott Valves throughout the oil country. This means quick service for you.



"If Continental Sells It....There Is No Better"

THE CONTINENTAL SUPPLY COMPANY

General Offices: ST. LOUIS J597

THE CONTINENTAL SUPPLY CO., LTD.
224 Traders Building, Calgary, Alberta, Canada
Export Offices: CONTINENTAL EMSCO COMPANY, INC. 74 Trinity Pl., New York
London Offices: 316-17 Dashwood House, Old Broad St., E. C. 2
CONTINENTAL EMSCO S. A. R., 7, Strada Eminescu, Ploesti, Romania

CONTINENTAL

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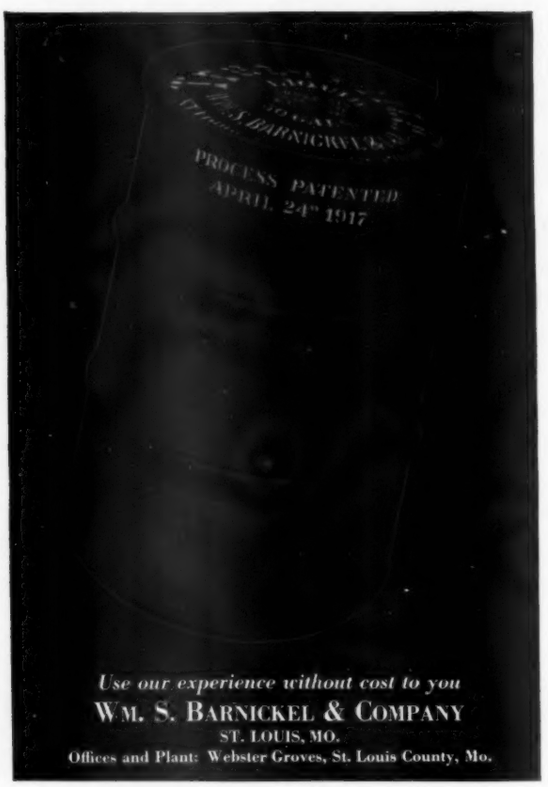
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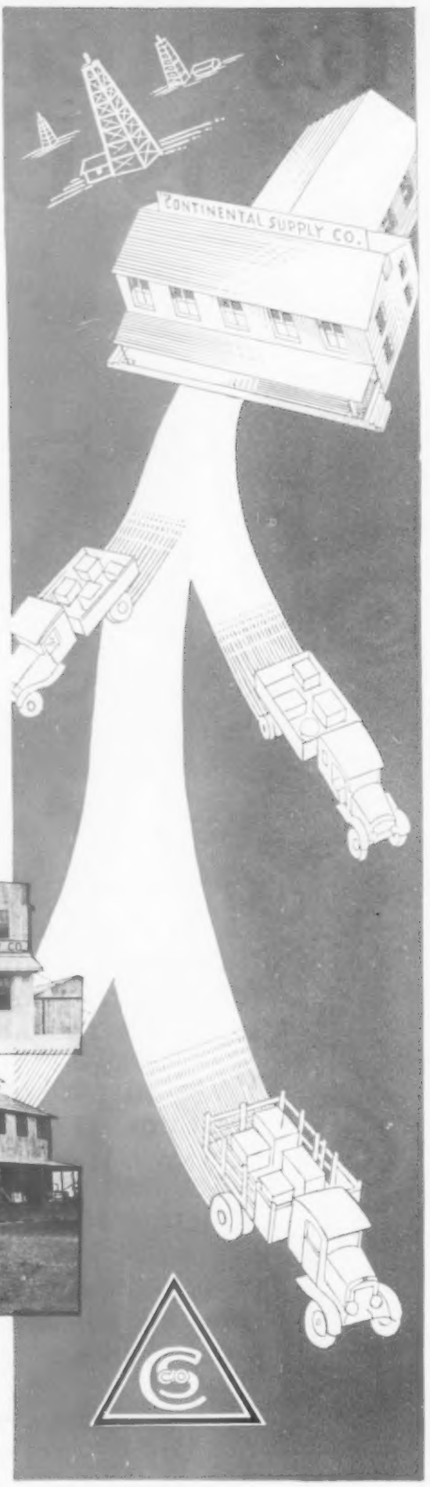

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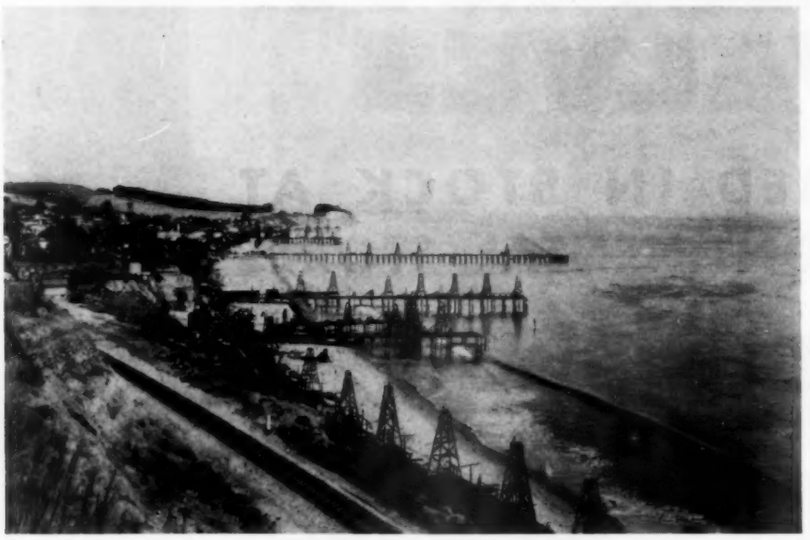
CONTINENTAL

Its Record of Service is Unsurpassed



The Summerland field showing piers built to drill and pump shallow wells.
Photo courtesy National Petroleum News.

THROUGHOUT the oil and gas fields of America and in the vast network of pipe lines, there are literally thousands of miles of Youngstown steel pipe whose performance is graphically illustrating the ability of this sturdy steel pipe to stand the gaff of the hardest service.

Youngstown Oil Country Tubular Goods are fabricated of the finest grade of steel, by pipe specialists, to A.P.I. specifications, specifically for the oil and gas industries.

Whether it is drill pipe, casing, tubing or line pipe, if it bears the "Y" trademark you can be sure that it is as fine pipe as money can buy. Its years of performance in thousands of wells and pipe lines assures you the soundest protection for your pipe investment.

THE YOUNGSTOWN SHEET AND TUBE COMPANY

One of the oldest manufacturers of copper steel, under the well-known and established trade name "Copperoid"

General Offices—YOUNGSTOWN, OHIO

CONTINENTAL SUPPLY CO.—1501 Locust St., St. Louis, Mo.
YOUNGSTOWN STEEL PRODUCTS CO.—3000 Santa Fe Ave., Los Angeles, Cal.
INTERNATIONAL SUPPLY CO.—Tulsa, Okla.
REPUBLIC SUPPLY CO.—2122 E. 7th St., Los Angeles, Cal.

YOUNGSTOWN

GALVANIZED SHEETS PROTECT ∴ ∴ SAVE WITH STEEL

After a QUARTER CENTURY of Building Screens

THE LAYNE

MILLED GROOVE *Screen* WAS PRODUCED

The "greater production" *Layne Milled Groove Screen*,—oil industry's latest, greatest, and most important invention—is the fruit of more than a quarter century's experience in solving screening problems.

The old Layne screen had very materially helped to develop the coastal oil fields, and now, this exclusive *Milled Groove Screen* has been accepted by the leading oil companies abroad and in this country.

The *Layne Milled Groove Screen* is your definite guarantee for greater production—no clogging with mud and sand, no sand cutting — and it has the strength to safely stand 8,000 feet of drill pipe.

Install *Layne Milled Groove Screen* instead of wishing you had.

Write, wire or phone for quick service, information or catalogue.

The Layne & Bowler Co.
Houston Texas

THE LAYNE *Increases Production*

The Layne New York Co.,
30 Church St., New York

The Layne & Bowler, Corp.,
Los Angeles, Calif.

Vickers, Limited,
London, England

A QUARTER CENTURY OF EXPERIENCE AND DEVELOPMENT

WHEREVER PIPE LINES ARE LAID

LINDE Process Service is an important factor in assuring economical installation and satisfactory performance. It brings to the firing line the results of intensive laboratory research and years of experience pioneering the field. It helps organize the work under standards dictated by the best engineering and field practice.

This service has demonstrated its ability to lower costs, speed up the work, and enable the production of a permanently tight line with tough, ductile welds as strong as the pipe—fully 100 per cent. efficient.

Linde Process Service is available to users of Linde Oxygen.

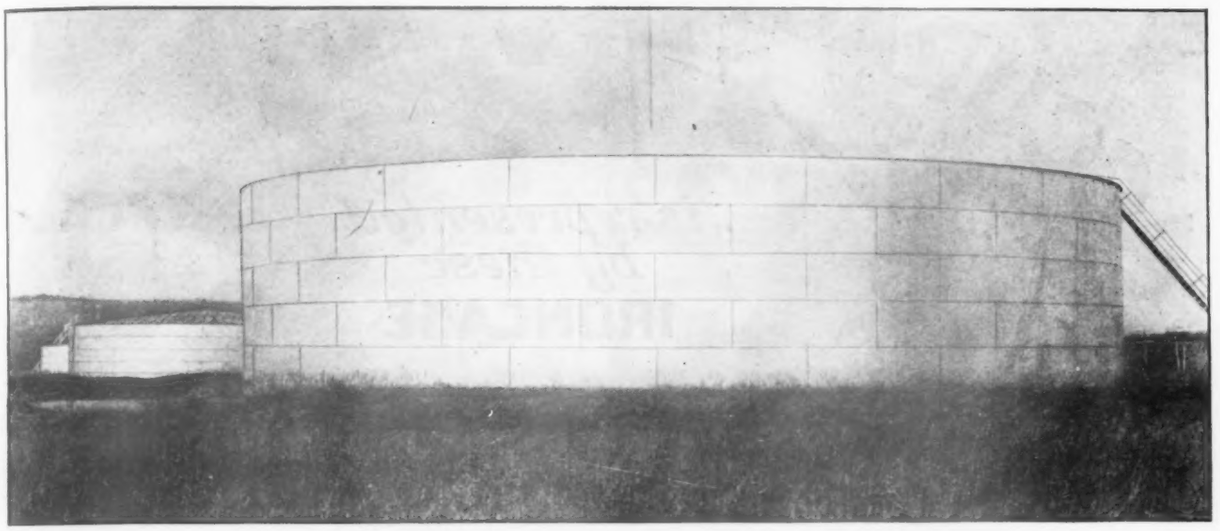
THE LINDE AIR PRODUCTS COMPANY, THE PREST-O-LITE COMPANY, INC., OXWELD ACETYLENE COMPANY, UNION CARBIDE SALES COMPANY,

Units of UNION CARBIDE AND CARBON CORPORATION

General Offices . . . . . New York UCC **Sales Offices . . . in the Principal Cities**

65 Linde plants . . . 48 Prest-O-Lite plants . . . 174 Oxygen Warehouse stocks . . . 156 Acetylene Warehouse stocks
42 Apparatus Warehouse stocks . . . 245 Union Carbide Warehouse stocks

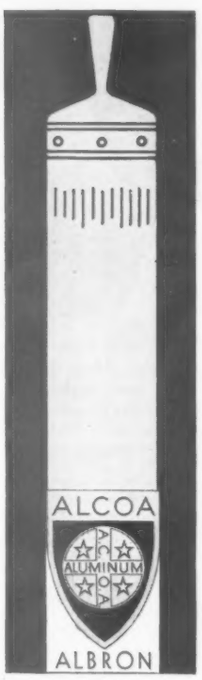
THIS COAT OF METAL PROTECTION



Durable — long lasting — if its pigment is pure Alcoa Albron

Aluminum paint has given the oil industry a new idea of how long paint can last.

Because this paint has a pigment of pure aluminum it provides a different kind of film—a coat of metal protection. On tanks, fences and all outside metal work, this coating retards moisture penetration—checks the formation of rust—lasts longer than ordinary paint film. In addition, aluminum paint reflects heat from the sun, thus minimizing evaporation losses and saving barrels of oil.



Use aluminum paint and you will find that you need to repaint less often. Yearly paint bills will be lowered, less money spent for replacements and maintenance.

Aluminum paint gives oil property a bright, clean appearance. It is an attractive color in paint—an eye catching color. Use it on retail filling stations as well as on bulk stations and refineries.

Aluminum Company of America does not sell paint. But aluminum paint made with satisfactory vehicles and Alcoa Albron Powder can be purchased from most reputable paint manufacturers, jobbers and dealers. Be sure the pigment portion is Alcoa Albron and is so designated.

Let us send you the booklet, "Aluminum Paint, the Coat of Metal Protection." ALUMINUM COMPANY *of* AMERICA; 2419 Oliver Building, PITTSBURGH, PENNSYLVANIA.

ALCOA ALBRON
POWDER FOR
ALUMINUM PAINT

ACCURACY in a complete cycle

..is represented by these

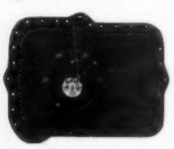
IRONCASE

METRIC METERS

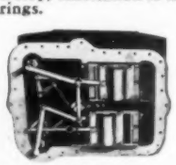
The Quality High Points in Metric Ironcase Meters

These three Ironcase meters now have greater capacities, yet their weights have been decreased.

Capacities: 2,500, 6,000 and 10,000 cu. ft. per hour with no increase in revolutions per cu-ft. of gas measured.



Timken roller bearings are used on crank step, crank stand and two flag steps: alemite (non-stop) lubrication to these bearings.



Lighter weight valve covers elimimate friction and its noises, securing, withal, better-than-ever wearing qualities.

Complete:—in range of capacities; in ability to measure low, medium and high pressures; in designs that present the "just right" type for each of the many services where the use of Ironcase meters is considered standard practice.

Construction Refinements:—fine, gray iron cases especially protected against interior corrosion; choice of connections (on four smaller sizes); all parts in plain sight permit ready adjustment through handholes; carefully selected, flawless diaphragm leather of finest quality, correct weight and especially tanned for measuring service; superior bronze in bearings and parts subject to wear; Timken bearings and Alemite lubrication (in the large capacity sizes); gas tight, long wearing valves.

Accuracy Assurance:—continuous progress in measurement science,—in testing, in proving, in finding better materials, in designing parts that improve operations, in building higher quality meters with greater precision (a program now carried on for forty-two years) is the basis of customer satisfaction, as well as being the assurance of accuracy that accompanies each of these meters into service.

Metric Ironcase Meters make it possible to standardize on the use of a single design for a wide variety of requirements. Gas companies are finding many advantages in this plan. Ironcase facts and any specific data desired will be gladly furnished.

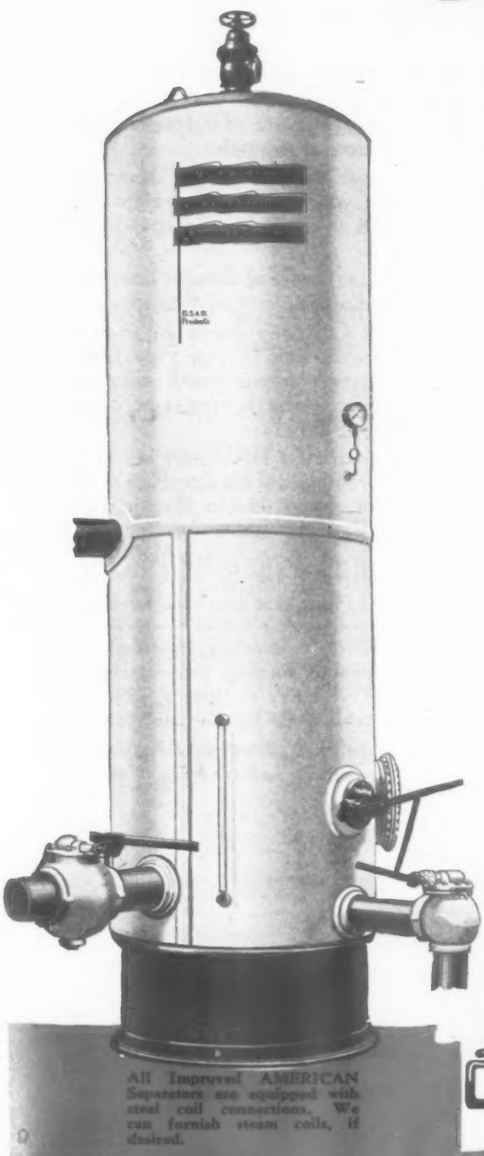
METRIC METAL WORKS
ERIE, PENNSYLVANIA
IRONCASE, TINNED STEEL CASE and ORIFICE METERS

AMERICAN METER COMPANY
INCORPORATED
The World's Largest Manufacturers of Gas Meters and Allied Apparatus
ESTABLISHED 1836

SALES SERVICE · ERIE · DALLAS · TULSA · DENVER · LOS ANGELES
SAN FRANCISCO · KANSAS CITY · PITTSBURGH · CHICAGO
PHILADELPHIA · NEW YORK · BALTIMORE · BOSTON · ALBANY

AMERICAN METER CO
MEASUREMENT ENGINEERS
CUBIC FEET

Crack the Whip!



All Improved AMERICAN Separators are equipped with steel coil connections. We can furnish steam coils, if desired.

A Principle of the Improved *American* Oil & Gas *Separator*

EQUIPPED WITH B.S.&B. SPRAY CONDENSER

AS the flow comes from the well, when the Improved AMERICAN Oil and Gas Separator is used, it enters through the Inside Tangential Inlet, taking full advantage, without any impairment, of the principle of centrifugal force. The engineers who designed this Improved AMERICAN Separator were not satisfied with just this, for the gas that is removed is still wet and valuable globules of oil remain in suspension in the on-rushing gas.

So the B. S. & B. Spray Condenser was devised! The on-rushing gas, in its endeavors to escape, is forced through this condenser in a way that is similar to the principle of "Crack-the-Whip." You know how the last boy is whirled about!

The gas is whipped through a series of passages in such a way that absolutely every particle of oil is thrown out of it! Thus 100% dry gas!

"See American First!"

BECAUSE of the results of using the Improved AMERICAN Oil and Gas Separator, give consideration and see a demonstration, if possible, of this separator before purchasing. Learn more about the Tangential Inlet, and the B. S. & B. Spray Condenser. Learn about the Inside Oversize Float that has a capacity of ten of the ordinary Outside Floats. Learn how the operation of this separator may be controlled in accordance with the volume, pressure, sand and low temperature conditions. There are so many points in its favor.

It will pay you to investigate fully the Improved AMERICAN. See this AMERICAN in action!

May we send complete information—or, better still, a representative? Please address Dept. AA-3.

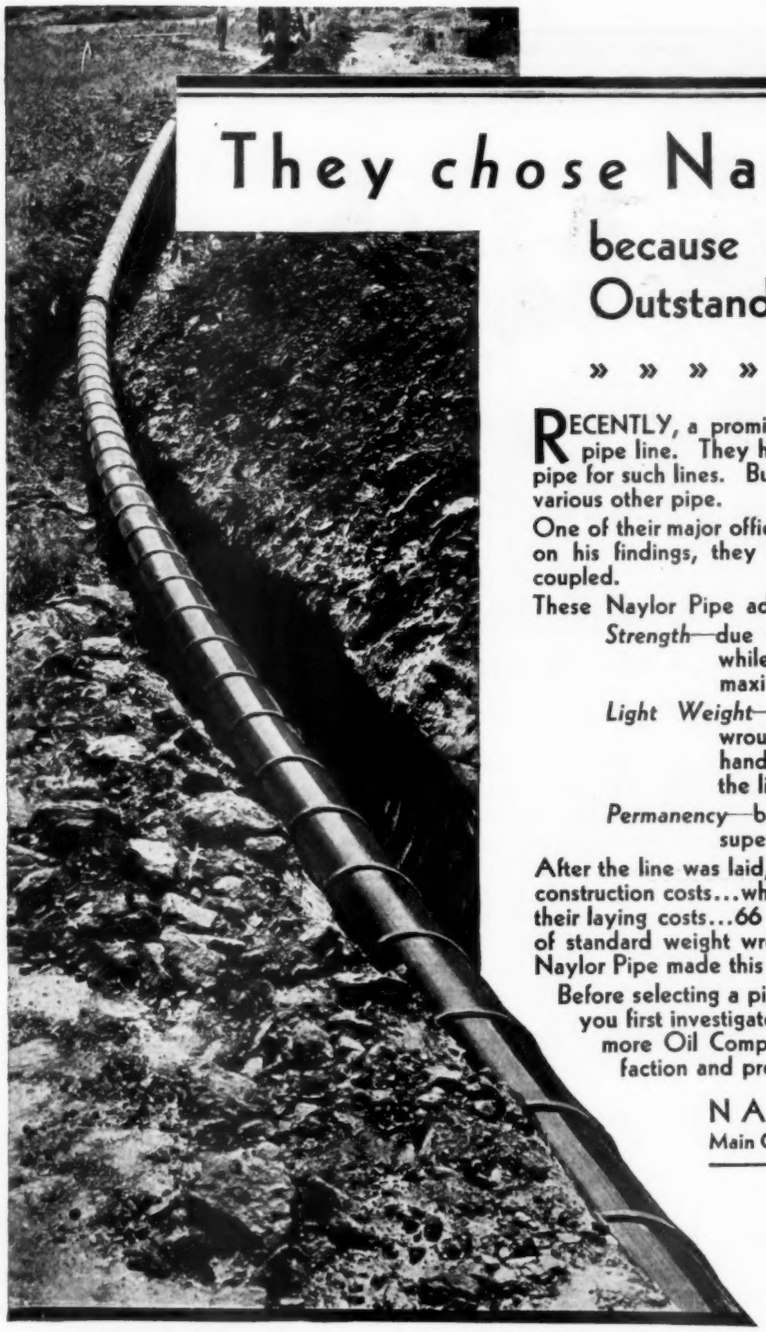
AMERICAN
OIL FIELD EQUIPMENT
Always Dependable.

American Tank Co.

A SUBSIDIARY OF
BLACK, SIVALLS, & BRYSON, Inc.
BARTLESVILLE, OKLAHOMA

B.S.&B. Products

OKLAHOMA CITY, OKLAHOMA



They chose Naylor Pipe

because of Three Outstanding Advantages » » »

» » » » Then discovered one advantage had reduced their laying costs 66 2/3%:

RECENTLY, a prominent oil company planned to lay a 10-inch pipe line. They had customarily used standard weight wrought pipe for such lines. But this time decided to thoroughly investigate various other pipe.

One of their major officials conducted the investigation. And, based on his findings, they chose Naylor Pipe, 40-ft. lengths, Victaulic coupled.

These Naylor Pipe advantages had determined their final choice:

Strength—due to the spiralwelded lock-seam truss which, while permitting the use of lighter material, assures maximum structural strength.

Light Weight—one half the weight of standard weight wrought pipe, which means less freight charges, less handling costs in the field, and speedier laying of the line.

Permanency—because it is made of Toncan Iron which has a superior resistance to rust and corrosion.

After the line was laid, the Oil Company made an analysis of the construction costs...which revealed that Naylor Pipe had reduced their laying costs...66 2/3%...as compared with previous laying of standard weight wrought pipe. The light weight advantage of Naylor Pipe made this saving possible.

Before selecting a pipe for your next line...may we suggest that you first investigate the advantages of Naylor Pipe? More and more Oil Companies are doing so---to their decided satisfaction and profit.

NAYLOR PIPE COMPANY
Main Office and Plant, 1230 East 92nd Street, CHICAGO

Sales Offices:
3116 Chrysler Building, New York
Witherspoon Building, Philadelphia
507 Philtower Building, Tulsa
601 Post-Dispatch Building, Houston
Montreal, Can., Mechanical Equipment Co.
660 St. Catherine St., West

Installation in Oklahoma of 6-inch Naylor Pipe, 40-ft. lengths, Victaulic coupled. Note bendability and flexibility of Naylor Pipe.

TONCAN COPPER

Naylor Pipe

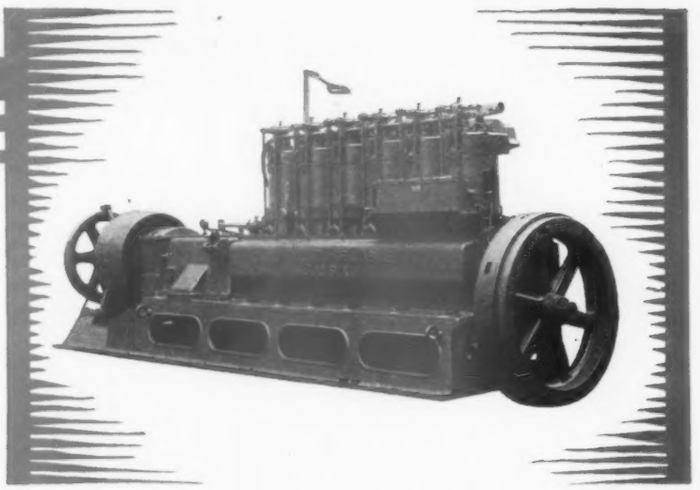
Maximum Structural Strength — Mo-lyb-den-um — With Minimum Weight

IRON

Standardized Naylor Pipe is made in sizes 6" to 12" I. D. and 14" to 20" O. D. in any uniform length desired up to 40' 0". Ends made to wrought pipe standards for all types of coupling.

Where corrosion is not a problem, Naylor Pipe can be furnished in steel.

Toncan Copper Molybdenum Iron possesses a superior corrosion resistance, making it the favored pipe material.



CUT OUT WASTE

OF FUEL, TIME, WATER

with a

WRIGHT RELIABLE

DRILLING ENGINE

A DRILLING ENGINE that does away with leaky flues and boiler trouble; that requires attention only for oiling and fueling; whose water consumption is negligible; that utilizes Natural Gas where available—or converts every gallon of Gasoline into Drilling Power *without waste;* if you have been using steam engines and boilers you will especially appreciate the low cost of WRIGHT RELIABLE Drilling Power. Ask the man who uses a WRIGHT.

Mail the coupon today for descriptive literature. No obligation, of course.

Burns Natural Gas or Gasoline

—

Uses only a fraction of the fuel or water needed for a steam engine and boiler.

—

Requires a few minutes attention daily.

—

Reliable, trouble-free drilling power at minimum cost per hour.

The Wright Machine Co.

OWENSBORO, KENTUCKY.

Gentlemen: Please send me descriptive literature on your WRIGHT RELIABLE gas-gasoline engines. I understand this does not obligate me in any way.

Name .....

Company .....

St. No. .....

City ..... State .....

Manufactured by

THE WRIGHT MACHINE CO., *Inc.*

Established 1880

OWENSBORO, KY.

Distributed in the Mid-Continent Field by the 15 stores of

BRIDGEPORT MACHINE CO.,

WICHITA, KANSAS

Backed by Bridgeport's 24-Hour Day and Night Service

LUCEY OFFERS *The* SUPER SWIVEL

Designed to carry a load of more than 180 tons, the Lucey E-6500-A "Quad" Oil Bath Swivel is the answer to the Oil Industry's demand for a super-strong, super-smooth, super-safe swivel.

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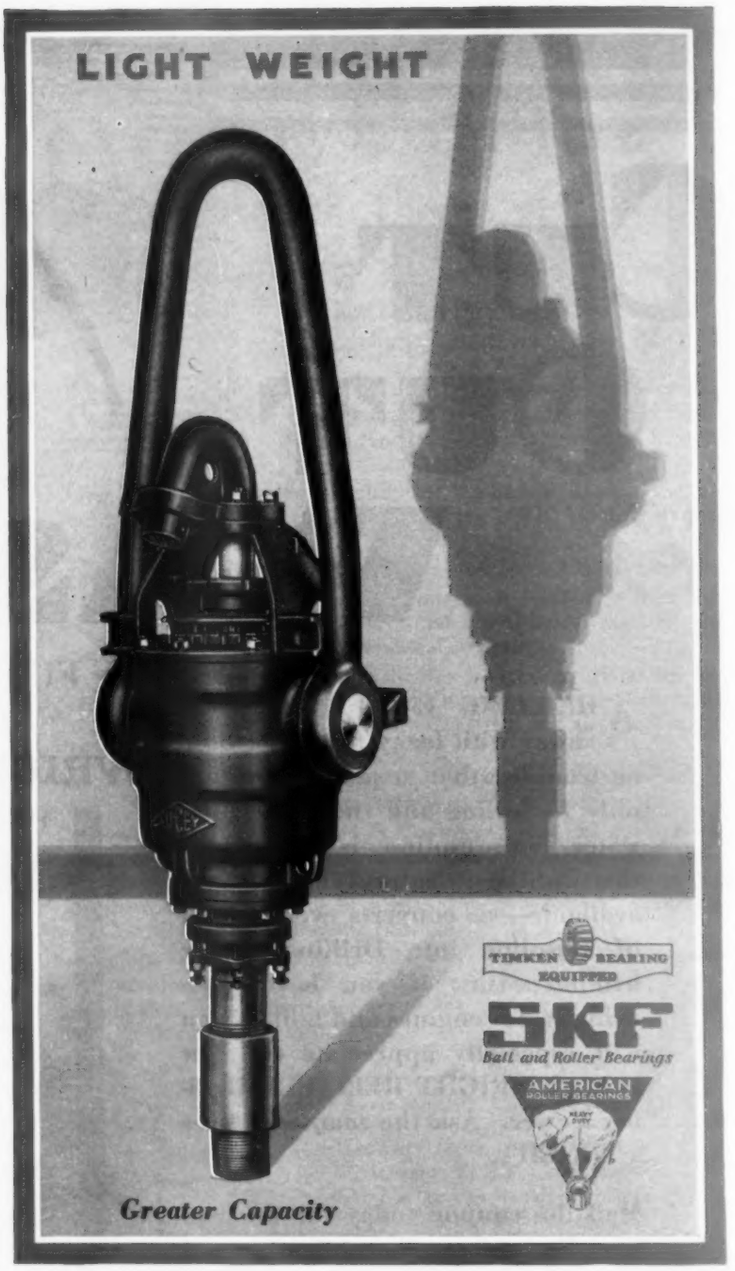

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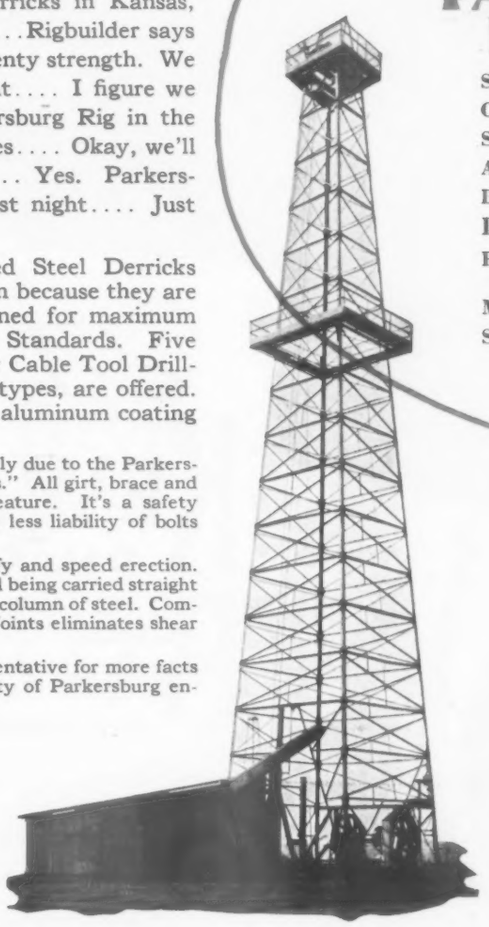

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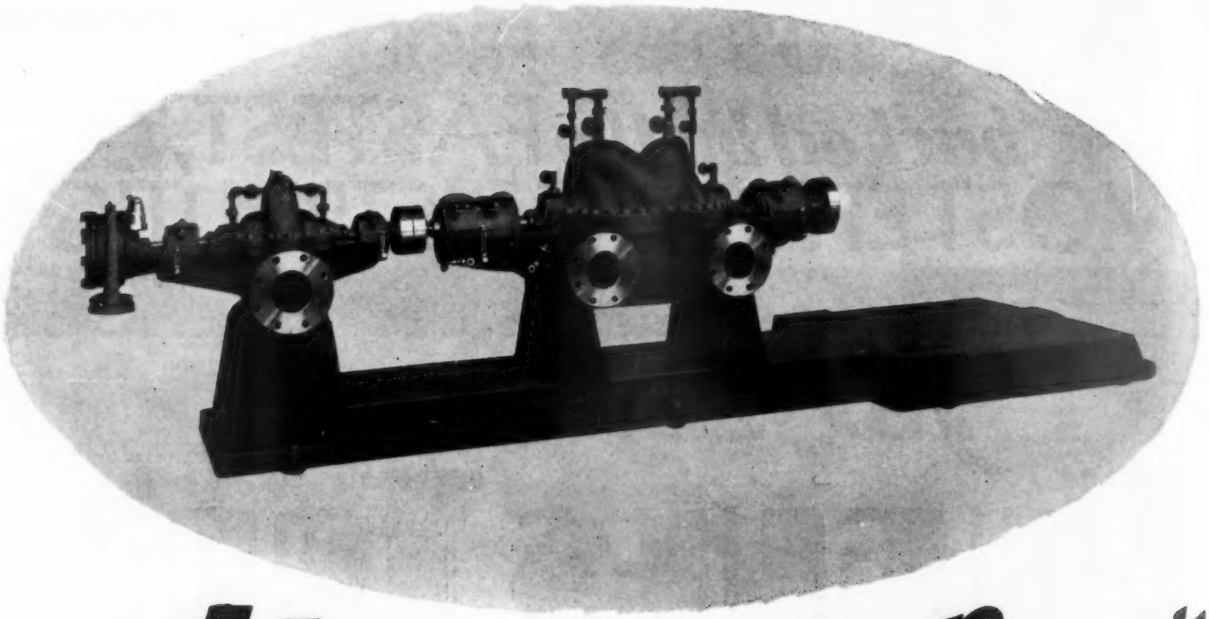

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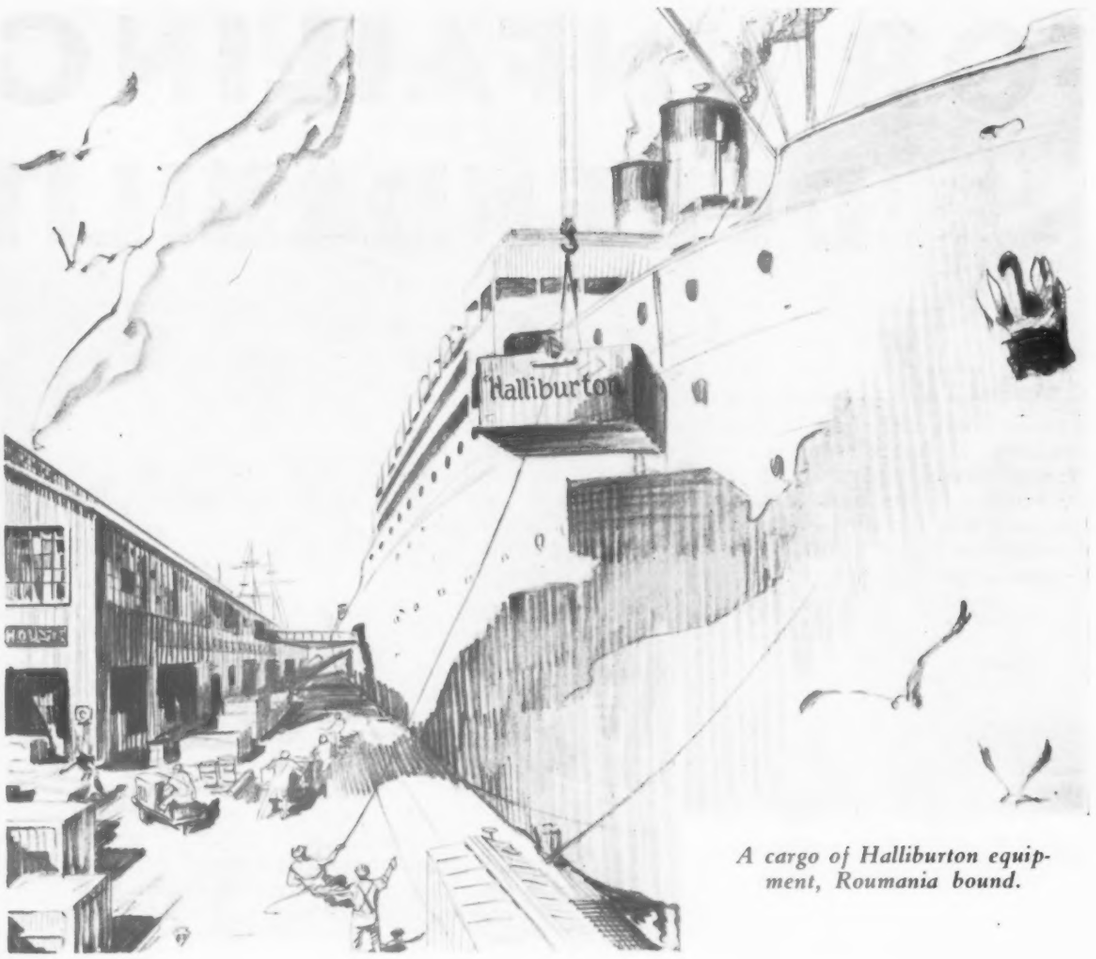

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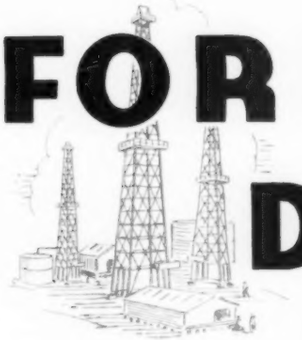

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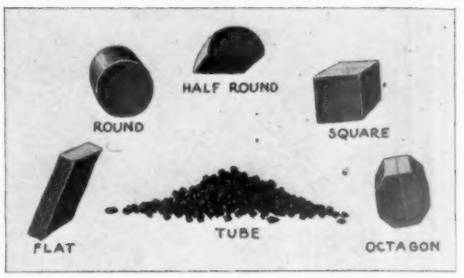

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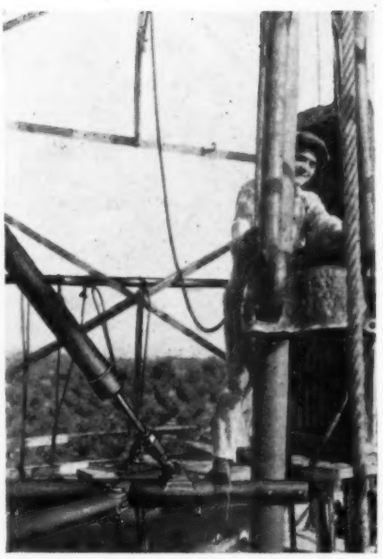

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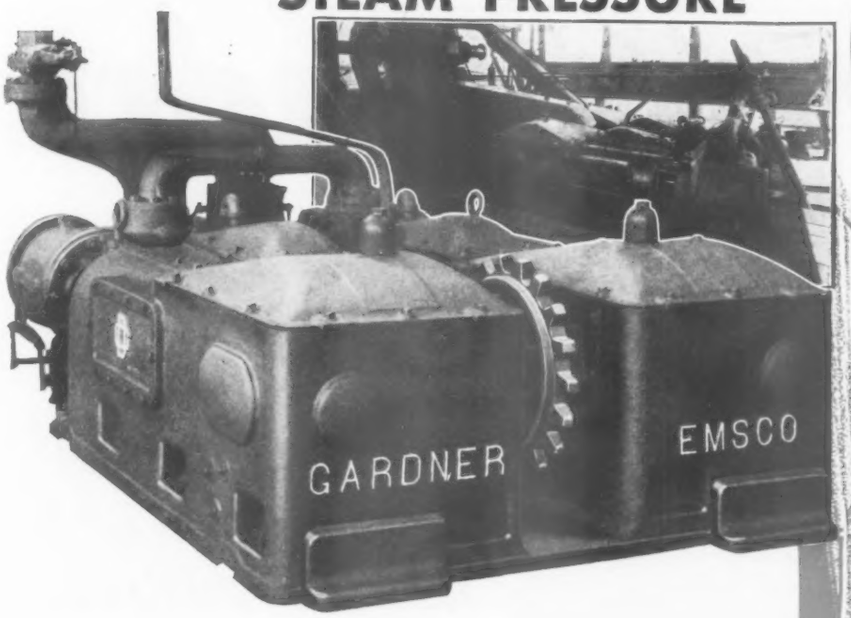

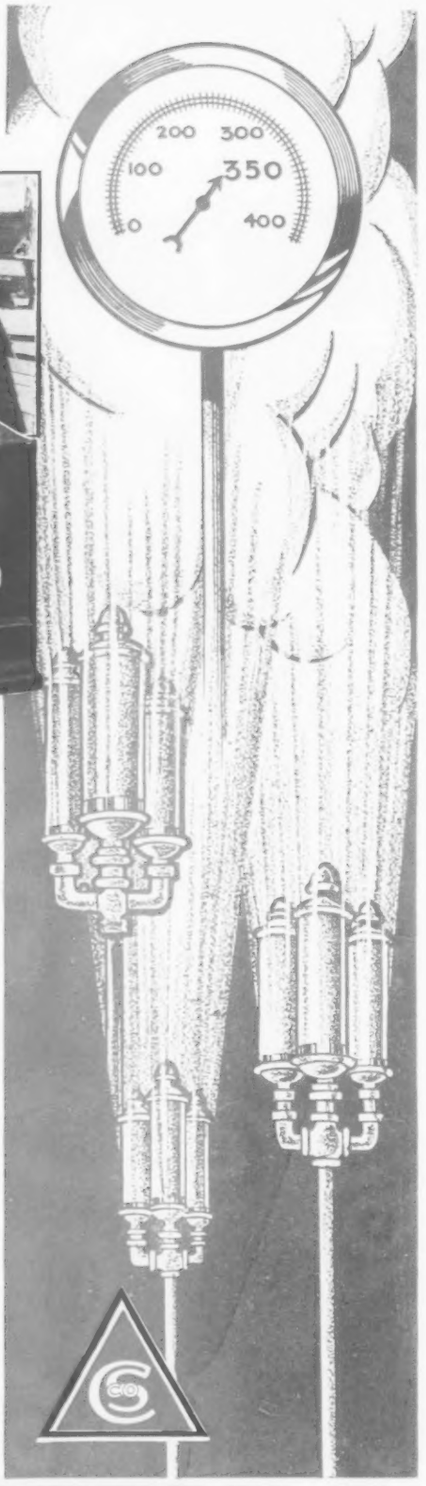

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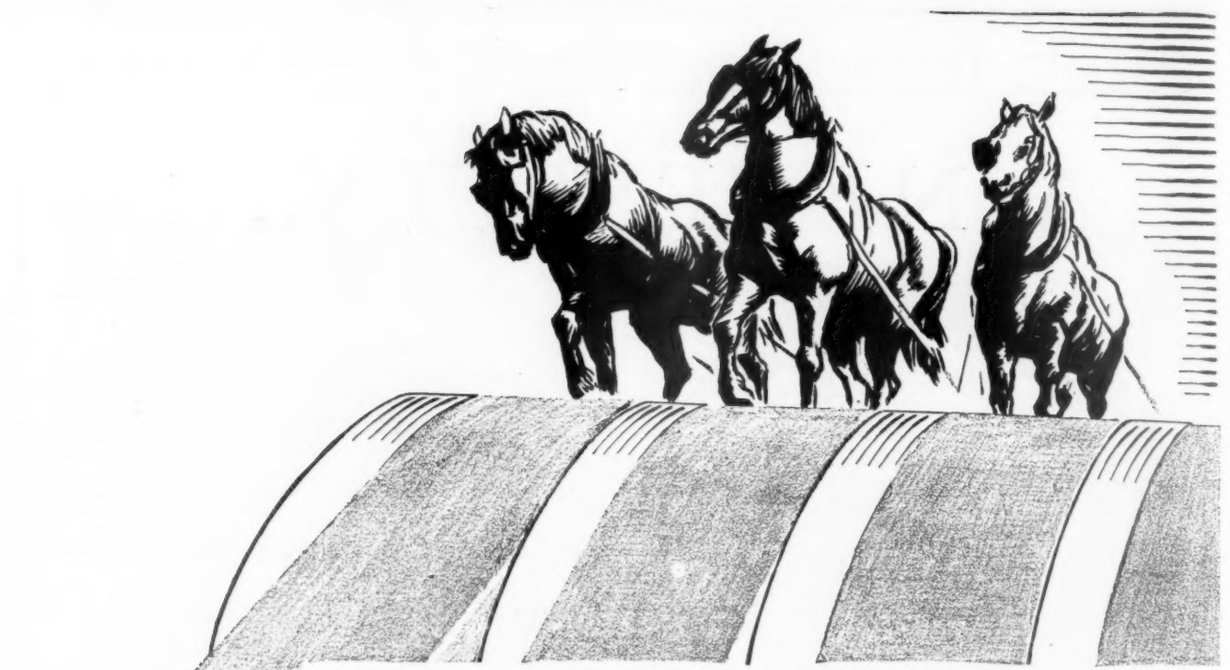

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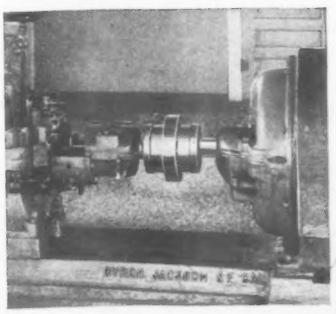
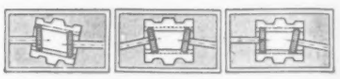


Fast's Coupling on Byron Jackson pump assembly at Maud station of Oklahoma Pipe Line Company.



Two spur gears, one on each shaft end, mesh in oil with the internal gears of a floating sleeve, the entire assembly revolving as one unit, misalignment being taken up between the gear faces.

"Now we can stop coupling break-downs"

"WELL, this last test proves that there is a way to stop coupling break-downs. Fast's Self-Aligning Coupling does the trick."

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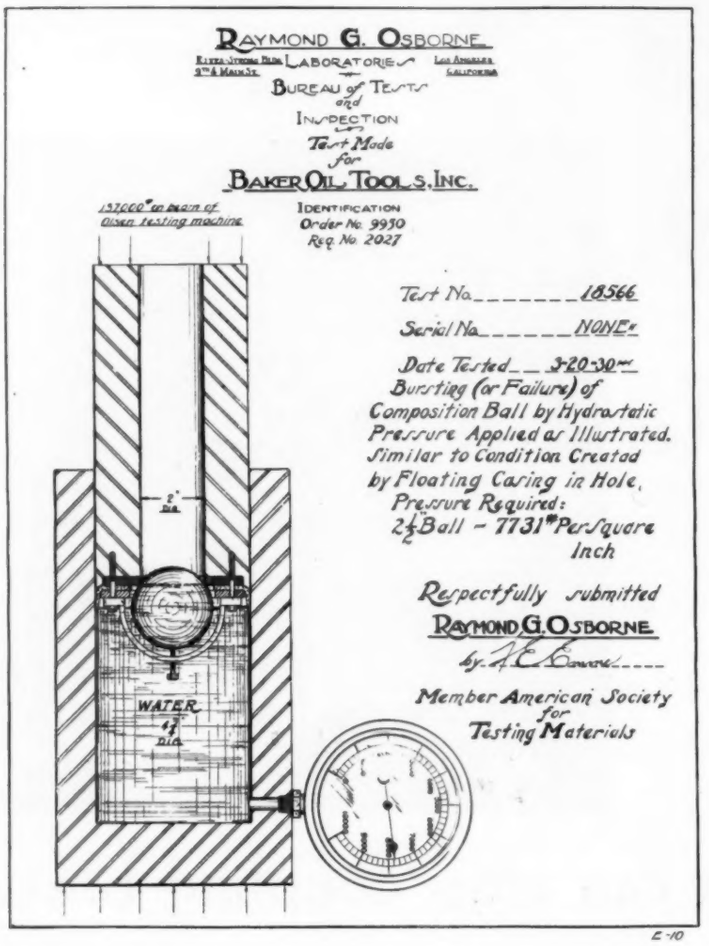
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JUL 26 1930

A Gulf Publishing Company Publication

The OIL WEEKLY

Member Audit Bureau of Circulations

VOLUME 58, No. 6 — JULY 25, 1930

Edited Weekly at Houston, Texas — SPENCER W. ROBINSON, EDITOR

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Coming Up!

For the first time THE OIL WEEKLY presents in advance a digest of a coming issue, its Mid-Year Statistical—combined with its European issue—August 1.

Watch for this issue—one of the most valuable of the year.

Here are some of the features, although by no means all of them:

European Section

1. Can England Develop an Oil Industry at Home?
2. German Operating Methods and Their Future Application.
3. Polish Operators Join Forces for Extensive Wildcat Prospecting.
4. Russian Drilling and Production Methods.
5. Russian Oil and Its Influence on Foreign Markets.
6. Roumanian Government Proposes Curtailment of Production.
7. Sidelights on Leading Figures in European Petroleum Circles.

Statistical and Review Section

1. Mid-Year Review and Forecast.
   H. J. STRUTH, *Staff Economist*
   (Including: Crude Production, Refinery Runs, Imports, Exports, Natural Gasoline Production, The

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OIL WELL SUPPLY CO.

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Volume 58, No. 6 *July 25, 1930*

The OIL WEEKLY

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California Above Allowable; Curtailment to Continue

By BRAD MILLS
Staff Representative

LOS ANGELES.—A number of good completions in several California fields kept production above the allowable during the past week, but announcement of reduced refinery runs and assurance that curtailment will be continued balanced the more unfavorable developments. Excesses in the critical fields and failure to reach an agreement on the course to be pursued at Playa del Rey added to the worries of the various committees but these difficulties have been expected and adjustments will be made unless some unexpected turn develops.

Rumors of a much lower crude production to force a reduction in stocks are being heard, but there is little likelihood that the allowable will be reduced much below the present figure. Stocks are supposed to be reduced by 60,000 barrels daily with production not exceeding 600,000 barrels, although general business conditions will affect consumption and render estimates made during last year virtually useless. Total stocks have declined slowly, the reduction in crude output having failed to force a smaller drop than anticipated. The elaborate scheme to reduce stocks uniformly on the basis of demands for various groups of commodities has not been carried out, except on a modified scale. Reduction of refinery runs may act as a governor on production by lessening the demand for excess crude.

Creation of additional outlets for California products would go a long way toward eating into the surplus held within the state. Major companies are attempting to develop new markets, with the Orient and Japan getting much attention. California is the natural source of supply for much of this territory and increases in the use of petroleum products will benefit producers. With production down and stocks up, the solution to the problem seems to lie at least partially in development of additional outlets.

Announcement by Standard Oil Company of California and other producers and refiners that refinery operations will be limited to meet actual needs was a more positive gesture toward stabilization, the producing division of the industry being affected as much as the marketing and manufacturing branches by the step. Early in the year refinery runs were reduced by about 20 per cent to meet an emergency, and the further reduction will remove some of the troublesome factors. Daily average runs to stills during July should drop considerably below the level of June.

The crude market in California has fluctuated roughly with the demands for refinable crude. When the curtailment program was placed in effect, belief that small refiners would have difficulty in getting a supply of crude was not wholly confined to the independent refiners themselves. Heavy purchases of crude by refiners was taken as an indication that a drop of more than 150,000 barrels in the daily output would run somebody short. The sharp drop in production failed to bring about a shortage and some of the heaviest purchasers of crude could spare parts of their contracts. Failure of the shortage to develop was a tribute to operators who could have combined to embarrass refiners with a limited production.

Expect Smaller Allowable

With refinery runs well below production, the advent of a smaller allowable is anticipated in some circles. Runs to stills are now below the point at which stabilization was expected, but the long period of overproduction has prevented a rapid return to normal conditions. July crude runs to stills will be watched closely to determine the effect of reduced refinery operations on crude and gasoline stocks. These stocks have shown a stubborn tendency to resist a decline, and it may be possible to arrive at a more equitable output of crude through the influence of refinery runs.

Reduction of all classes of stocks has been a disappointment since the inauguration of the curtailment program. The drop has been negligible in some commodities, but the fact that the upward trend was definitely halted must be regarded as an important development. The smaller output has prevented the posting of a crude price schedule which would have been lower than any in force in California for a long time. If a reduction of 150,000 barrels barely saved the situation, what would a daily production of 750,000 barrels have brought about?

A further reduction in the allowable production would be a sensible step, but the requirements of certain companies which are not ostensibly producers, enter into the situation. Availability of light crude, with the curtailment program in effect, makes a much lower production seem more logical than any time previous to inauguration of the present plan.

Permits to drill new wells in California during 1930 total 445, as compared with 755 at the same date last year, the smaller number being attributed to curtailment and the general reaction from extensive activity of the past three years. The Playa del Rey field accounted for 12 new wells last week, which was a full two-thirds of the total permits granted. It was the largest number of new wells started in any one area since last year. Although activity in wildcat areas has not been affected as much as in the proven fields, permits granted for new wells in the undrilled districts, are declining.

New wells started during the remainder of the year probably will not exceed 65 per cent of the total started during the latter part of 1929, although an unexpected turn in development might cause a rush to new fields. Tests of water shut-off during 1930 total 492, as compared with 882 at the same date last year. The difference runs roughly in the same proportion as in permits granted for new wells. Deepening or re-drilling jobs since January 1 stand at 358, as compared with 418 during 1929. All phases of development reflect the reduced activity, but field work in the proven fields suffered most, with the possible exception of Long Beach.

(Continued on page 76)

Standard-Sinclair Deal Involves $72,000,000 Cash

Indiana purchase of Sinclair half of pipe line system indicates confirmation of Sinclair-Prairie consolidation

TULSA.—Sale of its half-interest holdings in Sinclair Pipe Line Company and Sinclair Crude Oil Purchasing Company to Standard Oil Company (Indiana) was announced July 17 by Sinclair Consolidated Oil Corporation. The transaction was approved by directors of the Sinclair organization in New York and still must have the approval of stockholders, which is accepted as a formality.

Announcement by Harry F. Sinclair, chairman of the board, was to the effect that Standard Oil Company (Indiana) would pay $72,500,000 in cash and thus become owner of the pipe line system, its storage and stored crude oil.

Physical properties included in the deal consist of 6878 miles of trunk and gathering lines, which extend from Houston to Chicago, with a line from Teapot Dome to Freeman, Missouri; five tank farms; and 38,000,000 barrels of crude oil.

The line from Wyoming to Missouri has been inactive for several years. It was built following the leasing of Teapot Dome by a subsidiary of Sinclair Consolidated Oil Corporation. It carried crude oil for a short time. Since then much of the pump station equipment has been removed. In some circles it is assumed that this part of the system will be put into service by Standard Oil Company (Indiana) as a gasoline line. Its western terminus is near Casper, where the new owner, through its own plants and those of the Midwest Refining Company has a surplus of gasoline. Through this line gasoline could be delivered into the southern part of the marketing territory of the Indiana company.

Differences in elevation would allow use of the line without great pumping capacity. Elevation at Teapot Dome is more than 5000 feet, while the eastern terminus at Freeman, Missouri, is not more than 1000 feet. While the line was transporting crude oil, reports were to the effect that during the summer crude oil flowed through the line without any of the pump stations working.

The remarkable feature of the Sinclair-Indiana transaction is the fact that the huge sum of $72,500,000 is to be paid without resort to financing by Standard Oil Company (Indiana). This is made possible through the unusually strong cash position of the Indiana concern, which at the end of 1929 had current assets of $191,828,981, against current liabilities of only $48,444,029, a ratio of four-to-one. Of the current assets, $122,692,246 was cash, government securities and miscellaneous investments. In anticipation of this purchase, the Indiana concern probably fortified itself still further during the first half of 1930, so that after the present sum is paid for this purchase, the company will still have a strong cash position.

Expansion of Standard Oil Company (Indiana) has always been accomplished out of earnings; the company has never done outside financing. In 1917 there was an item of $438,500 in bonds, but these had been taken up before 1925.

With accumulating profits since the dissolution of the former Standard Oil trust in 1911, Standard Oil Company's (Indiana) surplus has grown from $10,216,046 at the close of 1912 to $227,325,751 at the end of 1929. Total assets of $43,934,687 on December 31, 1912, are now $697,034,464.

This company has distributed liberal cash dividends to stockholders the regu-

First Contracts for 1000-mile Gas Pipe Line Are Let

TULSA.—First contracts for the construction of a 1000-mile 24-inch pipe line have been awarded by Continental Construction Company at its headquarters in the Professional building, Kansas City, to Sheehan Brothers, Tulsa, Bechtel & Kaiser, San Francisco, Ford, Bacon & Davis, Inc., New York, and Smith Brothers, Dallas.

Continental Construction Company, a Delaware corporation, was formed by Cities Service, Insull interests, Southwestern Development Company, Standard of New Jersey, The Texas Company, Skelly Oil Company, Phillips Petroleum Company and Columbia Carbon Company, to construct this natural gas line. These companies have, in Texas, Oklahoma and Kansas, a supply of natural gas available to this line said to be in excess of 7,000,000,000,000 cubic feet and plan to serve over 50 cities and communities en route.

Starting from a point in Moore County, Texas, this line will run north through the Oklahoma Panhandle to a point near Meade, Kansas, then in a northeasterly direction across the state through Washington County to Platsmouth, Nebraska, where the line will cross the Missouri River.

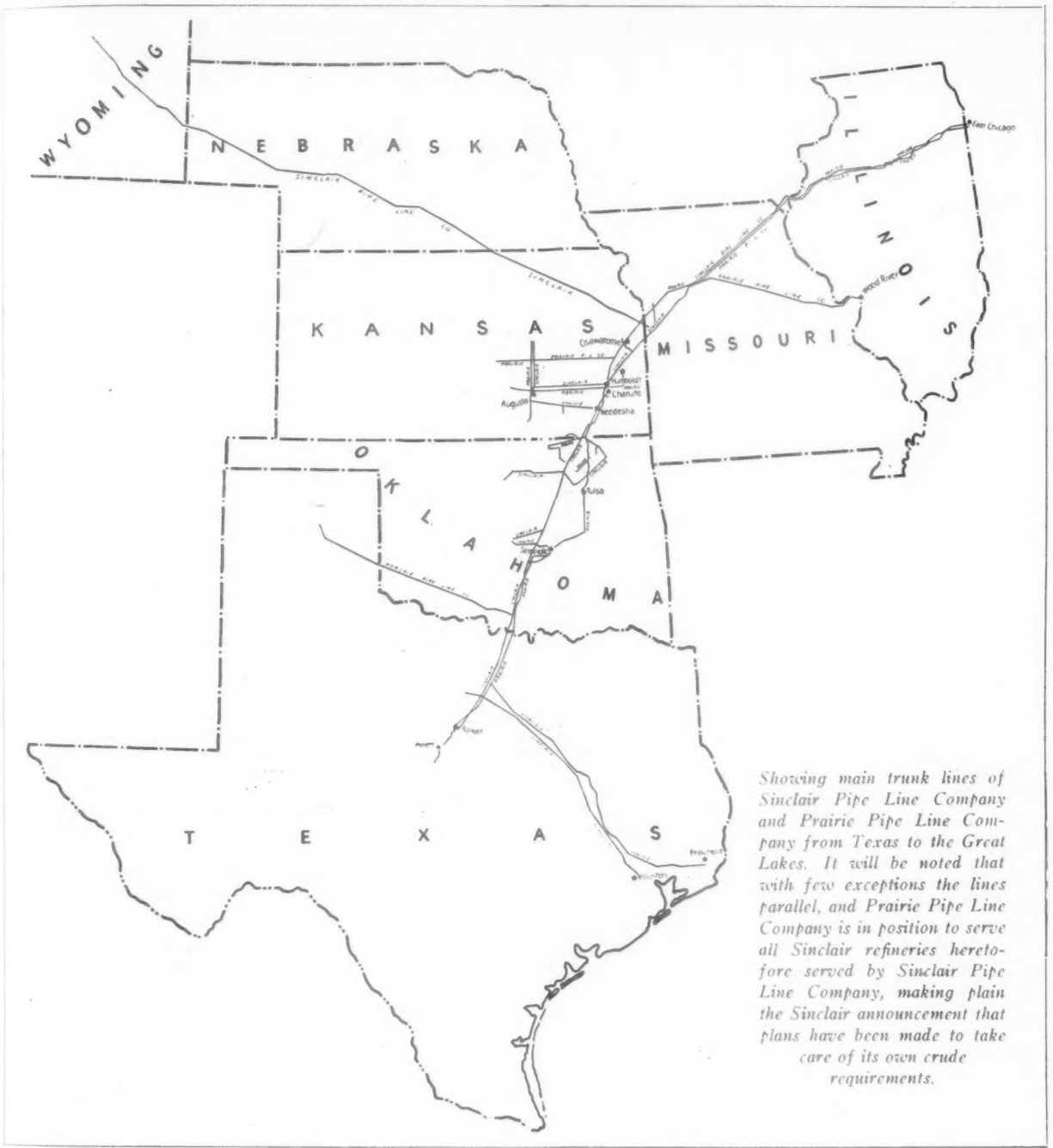
Across Iowa in an east-northeasterly routing, to cross the Mississippi near Muscatine and on east through Illinois, passing a short distance south of Chicago, where a connection with the Insull systems will be made, then to other markets.

Construction companies will use all local labor available in order to benefit as far as possible the residents of the cities, towns and communities through which this line will pass. An appreciable part of the $100,000,000 to be expended in building this line will be spent for labor.

Right-of-way along highways and across privately owned property has been secured; and another major feature of the contracts is that this gas pipe line will be buried below the cultivation line, a distance of three or more feet below the surface, to prevent interference with the cultivation of land, through which the pipe line will pass. Teams belonging to farmers residents adjacent to the pipe line are to be given preference in the hauling of construction materials at times which will not interfere with the cultivation of crops. These stipulations are voluntary on the part of the company and are in accordance with its stated program designed to alleviate wherever possible local unemployment.

This line will be a combination coupled and welded one. S. R. Dresser Manufacturing Company, Bradford, Pennsylvania, has received the coupler order.

An order for initial compressor equipment for this line has been placed with Worthington Pump & Machinery Corporation, whose gas engine works is at Buffalo.



Showing main trunk lines of Sinclair Pipe Line Company and Prairie Pipe Line Company from Texas to the Great Lakes. It will be noted that with few exceptions the lines parallel, and Prairie Pipe Line Company is in position to serve all Sinclair refineries heretofore served by Sinclair Pipe Line Company, making plain the Sinclair announcement that plans have been made to take care of its own crude requirements.

lar rate now being 62½ cents quarterly. Stock dividends were 2900 per cent in 1912, 100 per cent in 1922, and 50 per cent in 1929.

In taking over Sinclair's interest in these two companies, Standard Oil Company (Indiana) acquires gross assets with a book value of approximately $162,000,000 as of may 31. These include current assets of $110,000,000, and about $10,500,000 in cash. In addition, the Indiana company assumes the other half of the bonded indebtedness of $53,000,000.

Gross revenue of Sinclair Pipe Line Company for the year 1929 was approximately $23,600,000. After deducting operating costs, general administrative expenses, depreciation, interest, discounts and federal taxes, net income was $9,400,000. This represents eight per cent on the investment of the Indiana company in the two purchased concerns, without taking into consideration returns from Sinclair Crude Oil Purchasing Company.

This transaction between Sinclair Consolidated Oil Corporation and the Standard Oil Company (Indiana) has been accepted as assurance that the merger of the Sinclair Consolidated Oil Corporation and Prairie Oil & Gas Company and Prairie Pipe Line Company will be consummated. The statement by Mr. Sinclair was to the effect that the directors had in view other steps which would assure the concern ample crude oil supplies and pipe line facilities.

Since the Sinclair-Prairie transaction has been under process of consummation over several months, both financial and petroleum circles have accepted the sale of pipe line and storage facilities of Sinclair as an assurance that similar facilities will be provided through the Prairie merger.

Acquisition of Prairie properties would give the combined organization trunk and pipe line facilities of 13,000 miles. The

(Continued on page 51)

Geoelectrical Exploration Methods Used in Oil Fields[1]

By HELMER HEDSTROM
Field Manager, Swedish American Prospecting Corporation

THE electrical methods employed in prospecting for metallic ores are among the oldest of the geophysical exploration methods that are now used to a large extent by mining and oil companies. In the mining industry, geoelectrical methods of prospecting are definitely established and generally recognized as a valuable tool for locating hidden ore bodies; a number of important ore discoveries in the last 11 or 12 years are directly to the credit of these processes. In the oil production industry however, electrical exploration methods have been in use for only a little more than five years, and as the large bulk of the work done along these lines has been kept secret, it is not generally recognized among petroleum geologists and engineers how successful has been the application of geoelectrical methods in the oil fields. It is the purpose of this article to give, in a simple and non-technical way, an idea of how this geoelectrical work is carried out, and to present some examples of results obtained.

Underlying Principles

All geophysical exploration methods are based on the fact that it is possible to detect and locate from the surface a certain subsurface formation, if this formation differs from its surroundings in regard to some physical property, and if it is not too small in size or too deep seated. By the exploration of prospective oil fields, geophysical methods are not used to find the oil, but to locate and outline structural features that are known to be favorable to oil accumulation. Geophysical work is therefore in this case only an aid, although in many cases an indispensable one, to geological structure work, and this in turn is of course only an indirect means for the locating of oil.

The physical property one is concerned with by the use of geoelectrical methods is the *electrical conductivity* of rock formations, that is, their ability to carry electrical currents. For practical reasons, this conductivity is usually expressed by its inverted value, the *resistivity*, which expresses the resistance a certain material offers to the passing of an electric current. The electrical resistivity of a small sample of a certain material can be determined by measuring the electric *resistance* between the two end faces of a prismatic piece of the material. This resistance, measured in *ohms*, is then multiplied by the cross section area of the prismatic piece (in square centimeters) and divided by the length of the piece (in centimeters); the resulting figure gives the resistivity, which can consequently be expressed in units of either *ohms—cm* or *ohms per cm. cube*.

The electrical conductivity shows a very wide variation between different rock formations, much wider than the variation that occurs in the physical properties one has to deal with, for instance, by torsion balance or seismograph work. The sedimentary beds that form the sandstones, shales and limestones of oil fields, have in general conductivities hundreds of times larger than the conductivities of volcanics or igneous rocks like granite, syenite, basalt. In the same way, there is a very pronounced variation of conductivity between the successive beds forming the sedimentary column in an oil field.

The comparatively high electrical conductivity of sedimentary beds is due to the fact that such rocks nearly always hold in their pores a considerable amount of moisture, which is electrically conducting; the minerals (such as quartz, feldspar, mica) that make up these rocks are all non-conducting. The factors that determine the conductivity of a certain formation are therefore:

1. The percentage volume of water contained; and,
2. The conductivity of this water.

The percentage volume of water contained in a rock formation depends largely on the *porosity* of the rock, that is the volume of the interstices or voids between the grains, in per cent of the total volume of the rock mass. The porosity of sandstones runs into figures of up to some 25 per cent, as compared with something like half a per cent for igneous rocks; for sands the porosity generally ranges between some 25 per cent to 40 per cent, and for clays between 30 per cent and 50 per cent. It is therefore evident that such formations are able to hold large quantities of water in their pores. This is exemplified by the water sands met with by oil field drilling; however, it must be remembered that fine grained beds, like clayey shales, may hold even larger percentage volumes of water, although their water content is firmly retained in the microscopic pores.

The electrical conductivity of water is due to dissolved salts. Distilled water of highest purity is practically non-conducting, the fresh waters of rivers and lakes have resistivities of some 30,000 down to 3000 ohms-cm, while the brackish-groundwaters of hot climates have resistivities of only a few hundred ohms-cm. The saline subsurface waters met with in oil fields have resistivities anywhere from a couple of hundred ohms-cm down to only some 10 ohms-cm. A notable feature about the resistivity of salt waters is that it decreases with increasing temperature, at the rate of some one to three per cent per 1°F.; since the rock temperature increases with depth (at the rate of 1°F. per every 40-75 feet) it is therefore to be expected, if everything else remains the same, that the electrical conductivity of sedimentary formations will increase with depth.

Both the above factors that govern the electrical conductivity of rocks, are so variable between different members of a sedimentary formation, that one would expect the conductivity to show great differences between successive beds in the sedimentary column. So is also the case, as already stated above: the fact has been abundantly proven by resistivity measurements on fresh drill cores and by determinations of the resistivity in the walls of drill holes.

On the other hand, both the water content of a certain bed, and especially the salinity of the water contained, show a high degree of consistency in all directions along the bedding planes: in many cases structure mapping from drill hole data has been carried out on water of a certain salt content, when the particular bed carrying the water has been hard to identify.

In conclusion it can thus be said that the typical sedimentary formation met with in oil fields has an "electrical structure," which is conformable with the geological structure. It is therefore conceivable that one should be able to use electrical measurements to map the geological structure of such formations.

Different Ways of Application

The simplest geo-electrical measurements that could be used for the above purpose would be to measure the electrical resistivity in the walls of a drill hole, from the bottom to the surface, using the *resistivity profile* thus obtained for correlation of the sedimentary column between different drill holes, instead of the usual stratigraphic or paleontologic correlation.

Such a procedure has also been in use for some time, for the correlation between core drill holes, and it has in many cases been of great value, especially where the beds found by drilling to mod-

[1]This is the first of two articles by Mr. Hedstrom. The second will appear in an early issue

erate depths have been hard to identify in the usual way.

Figure 1 shows a typical example of such an electrical correlation between two drill holes, a quarter of a mile apart. The graphs show the electrical resistivity in the drill hole walls plotted against the depth, and they demonstrate the pronounced differences in resistivity between successive members of the sedimentary column as well as the consistency of the same physical property along the bedding planes; this consistency becomes more pronounced if groups of highly conducting beds as in A and B in Figure 1, are taken together as "electrical keybeds."

While the application of this method in open drill holes is comparatively simple, and inexpensive, it requires of course that drilling to a certain depth be done to start with, and this makes the whole procedure slow and expensive.

It would therefore seem preferable to use, for the depth determination to the electrical key beds, some geoelectrical method that can be worked from the surface. One such method which has been tried out is the following:

One end of an insulated wire carrying electrical current is grounded at the point of investigation, while the other end is grounded at a point so far away that it can for practical purposes be said to be at infinite distance. The current entering the ground at the first point is reflected and refracted by the electrical keybeds in the subsurface, in the same way as the light rays from a lamp are deviated when entering a system of parallel sheets of, for instance, glass, water, air. If the *voltage drop* away from the grounding point is now measured (per ampere of the current in the wire), along profiles on the surface, it is theoretically possible to tell from these measurements the depth to some outstanding electrical keybed. Unfortunately, the voltage drop along the ground is greatly affected by local inhomogeneous conditions in the surface, like changes in the drainage, in the nature of the soil etc., and it is therefore rarely possible by such measurements to picture geologic conditions at any appreciable depth.

Another electrical process that has been tried out, passes alternating current through the ground between two grounding points, and then tries to tell by means of search coils, operated on the surface, the deviations suffered by this current in the subsurface, in much the same manner as direction finding from ships at sea to radio stations is done by means of frame antennas. This method therefore deals with the *electro-magnetic field* from the ground currents (this expression will be explained below), but it ignores both the strength and the phase of the electromagnetic force and only tries to determine its direction. Although the process is thus founded on very incomplete and crude measurements, it was actually hoped for some time that this very method might make possible the *direct location* of oil pools, thus placing geoelectrical work in a unique position among other geophysical methods used in the oil fields. Theoretically, one would have a right to hope for this, since oil is electrically insulating and oil bearing strata therefore differ considerably from their surroundings in regard to electrical conductivity. Practically, however, the scheme has never worked out, except where the oil horizons occur within a few hundred feet from the surface, and in such cases the oil generally shows up on the surface anyway, in form of seepages, etc.

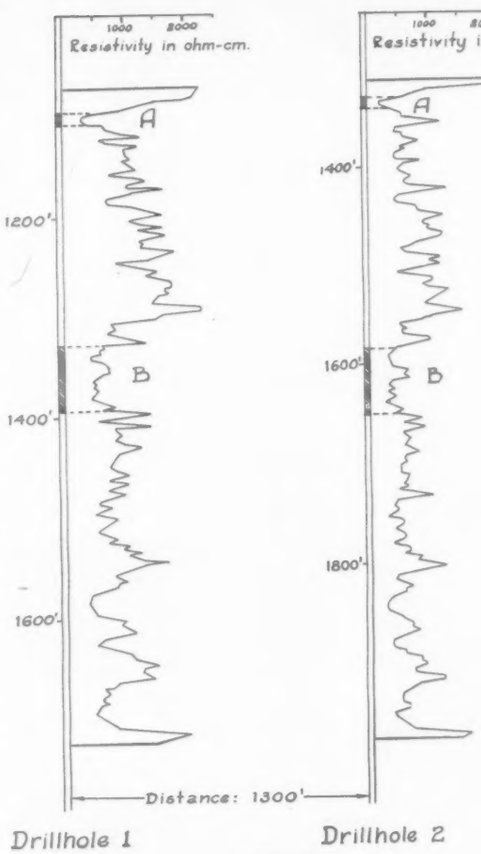


FIGURE 1

The reason for this failure of electrical methods in locating oil directly is the following: It is an uncontested fact, known from physical theory and experiments, that a subsurface formation, which is practically non-conducting to electrical currents, will show an electrical effect at the surface no larger (practically speaking) than if its conductivity were only 10 times smaller than the surroundings. An oil horizon will therefore not give any larger electrical effect at the surface than a dense shale or any other bed with an electrical conductivity some 10 times lower than the surroundings, and such beds occur in great numbers in any sedimentary formation and at any depth, as shown by resistivity measurements in drill holes. An electrical method working at the surface, and trying to locate "non-conducting" beds, like oil horizons, in the subsurface, will therefore get plenty of positive reactions almost everywhere (naturally also if applied in a producing oil field); the practical value of such a process is thus obviously nil.

The Sundberg Electromagnetic Method

The most important and most widely used of the geoelectrical methods for oil field exploration is the Sundberg electromagnetic method, which has been in use for about five years and has now attained a high degree of perfection. This method makes use of the physical phenomenon called electromagnetic *induction*, in order to cause electrical currents to flow along the electrical key beds of the subsurface, and for measuring the depth to these currents and thus to the key beds.

An example of a well known industrial appliance that makes use of electromagnetic induction, is the transformer used by light and power companies. Such a transformer consists in principle of two coils of wire wound concentrically and insulated from each other: when an *alternating current* is put through the one coil, called the primary coil, a "transformed" current can be taken out of the other, the secondary coil. The so-called arternating current of the primary coil is a current can be taken out of the other, the secondary coil. The so-called alternating current of the primary coil is a current that pulsates back and forth, changing its direction at the rate of, say, 120 times a second. (It is then said to have a *frequency* of 60 periods per second.) Like every electrical current this *primary current* sets up in the space surrounding it an *electromagnetic field* of force, which changes direction at the same rate as, and simultaneously with, the primary current. This electromagnetic field acts on the secondary coil in a similar way to the action of radio waves on a receiving antenna, and so an electrical current is set up in the secondary coil, by electromagnetic induction. The *secondary current* thus created pulsates back and forth at the same rate as the primary current (it has the same frequency), but its pulsations are out of step with those of the primary current, or as it is called by the electrical engineer, the *phase* of the secondary current differs from that of the primary current.

In the same way as in a transformer, if an insulated metal wire is laid out on top of a large metal sheet, and an alternating current is put through the wire, the electromagnetic field of this primary current will cause a secondary current to flow in the metal sheet, directly underneath the wire. This secondary current will have a different phase from the primary current, and the electromagnetic

field set up around the secondary current will therefore be out of phase with the primary electromagnetic field, which will be partly destroyed and distorted by the field from the secondary current. Therefore, if the total electromagnetic field in the vicinity of the wire is *measured*, which can be done by means of a small search coil and a *compensator*, an instrument used in physical laboratories, it will be found that the presence of the conducting metal sheet underneath the wire has not only decreased the strength of the field but also changed its phase. It will further be found, that if the search coil is kept in the same position with reference to the wire, and the metal sheet is moved away from the wire, there will be a different reading on the compensator for each new position of the metal sheet, consequently, it is possible to determine from the compensator readings the position of the metal sheet with reference to the wire. It will also be found that if the nature of the metal sheet is changed, for instance if one substitutes for it a sheet of another metal, or by a sheet of the same metal but with different thickness, then the electromagnetic field will also change, but in a quite different way from the change effected by a shift in the position of the sheet. Consequently, if several different metal sheets are used by experiments of this kind, the compensator measurements of the strength and phase of the electromagnetic field will tell not only the *depth* of the sheet underneath the wire but also *which* sheet is being used.

This principle is the one used by the electromagnetic method of Sundberg for determination of depths and electrical characteristics of the electrical key beds in the subsurface.

The field procedure of this method is the following: An insulated copper cable several miles in length is laid out in a straight line on the ground. Through this cable is passed an alternating electric current of moderate frequency, supplied by a generator outfit which is carried on a small truck; the return lead for the current is usually arranged through a parallel wire at large distance. The electromagnetic field thus set up around the cable is then measured in regard to direction, strength and phase, at different distances from the cable, along short transverse lines, which are staked out across the cable line at regular intervals. Every such cross line corresponds to one station of depth-determination to the electrical key beds in the subsurface: these "stations" are spaced from 600 feet to 1500 feet apart along the cable line, which thus forms a profile of investigation.

The arrangement for measuring the electromagnetic field is shown in Figure 2; it consists of a search coil, a compensator and an amplifier which are carried about by two men assisting the observer. The apparatus is so calibrated that the readings give the strength of the electromagnetic field in microgauss per ampere primary current in the cable. The electromagnetic fields measured are plotted by cartesian coordinates in diagrams, like the one in Figure 3, where the abscissa axis corresponds to the real component of the field, that is, that part of the field which is in phase with the primary current, and the ordinate axis represents the so-called imaginary component of the field, which is one-quarter of a period out of phase with the pulsations of the primary current.

FIGURE 2

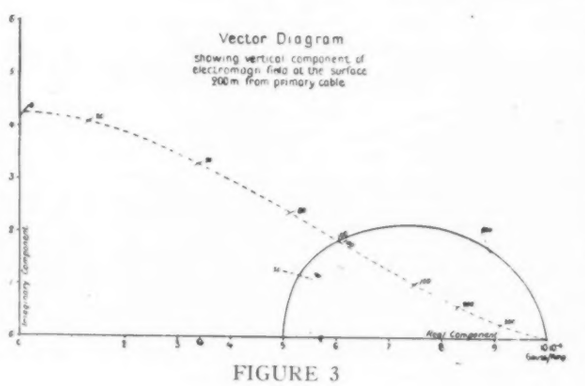


FIGURE 3

The two curves shown in Figure 3 are sample curves taken out of a complete diagram, which gives the reading of the vertical electromagnetic field at 200 m. distance from the primary cable, in the presence of a subsurface conducting bed of very large horizontal extension, and for any depth and any electrical characteristics of this bed. The dotted curve represents the locus for a reading due to the presence of a conducting bed of certistics, and the figures along the curve mark points where the reading will fall for different depths (expressed in meters) of this conducting bed. The solid curve represents the locus for a reading due to the presence of a conducting bed at a certain fixed depth, in this case 100 m. below the primary cable; the different figures along the curve mark points where the reading will fall for different electric characteristics of the conducting bed (a shift of the reading toward lower numbers on the solid curve means an increase in conductivity or thickness of the bed.)

The construction of such diagrams was originally founded nopure theory; it was made possible by a mathematical development from the famous electromagnetic theory of Maxwell (which is the foundation for modern electrical engineering.) The complete theory thus developed has since been brilliantly checked and upheld by laboratory experiments, and by the very large field experience accumulated in the use of this process.

From the nature of the diagram shown it is evident, that if only one bed, of sufficiently large conductivity and thickness to act as an electrical key bed, is present in the subsurface, then it is sufficient to measure the electromagnetic field, as described above, at one distance from the cable only; when plotted in the corresponding diagram this reading will then give both the depth and the electrical characteristics of the key bed. However, it is nearly always found by the use of this method, that the electromagnetic field measured is due to the presence of a system of several electrical key beds. For the solution of such a system of conducting layers it is necessary that readings be taken at several different distances from the cable, and occasionally also at several different frequencies. By the standard field procedure the number of data obtained is generally two or three times larger than would be necessary for solving the number of unknows in the problem and it is therefore always possible to get a complete solution, using the

(Continued on page 82)

General Layout of Plant

Pomona Vertical Drive Motor

Water Supply At Oklahoma City

By FLOYD SWINDELL
Staff Representative

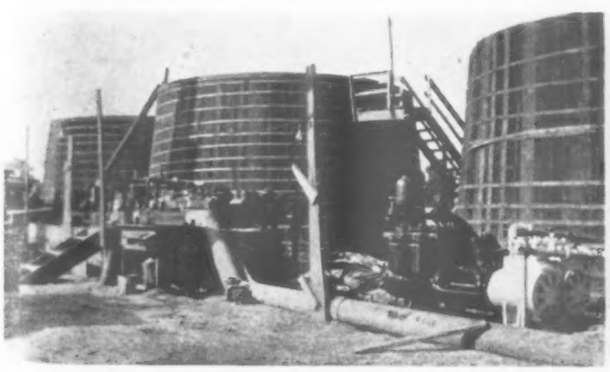
FURNISHING water for drilling wells in the Oklahoma City pool, where each completed well requires more than 150,000 barrels, is a large task both as to location of supply and as to distribution of that supply through an intricate system of field service lines. There are now about 260 drilling wells in the field proper, each consuming an average of not less than 1500 barrels daily or a total of 390,000 barrels. The T. B. Slick interests, under the direction of Jim Heugley, field superintendent, has in operation, a supply system which is furnishing more than 50,000 barrels of good boiler water to 31 drilling wells scattered throughout the field.

The supply is obtained from three wells sunk to a depth of 45 feet and bottomed in coarse gravel which underlies the bed of the North Canadian River. A method known as "sand treating" is used. Stove pipe casing 44 inches in diameter is first driven to bottom. After being cleaned out a string of 16-inch, with 12 feet of perforations at the bottom, is run inside the outer string. The 16-inch pipe is filled with gravel and the outside string pulled.

A centrifugal pump is placed at the bottom of each well and connected to a 25 horsepower motor by means of a steel shaft which is held in the center of the casing by hard rubber bearings spaced 10 feet apart. The motor is of the vertical drive type and is placed directly over the well.

The wells discharge into three 1600-barrel wooden tanks from which the water is pumped into the field service lines. On the distribution end of the system eight pumps are used. Two steam driven Mud Hog pumps, one 10 x 5 cylinder, Hercules gas driven pump, and five 10 x 4½ x 10 steam driven pumps, are placed in line alongside the tanks. The hook-up is so arranged that several of the pumps can be out of order at one time and the water supply kept on the move. The two Mud Hogs are placed at opposite ends of the line and within a few feet of the tanks, an arrangement which likely will be changed due to excessive vibration transmitted from the pumps to the tank walls and bottoms. Steam is furnished by a battery of four boilers.

Increasing domestic demands on the Oklahoma City water system along with a protracted drouth would make it imperative that oil companies turn elsewhere for drilling and boiler feed water. The few plants now in operation indicate that a plentiful supply exists in the sands and gravels underlying the river bed and it is not unlikely that a large number of plants, similar to the one just described, will be installed before the summer is over.



Arrangement of Pumps

Hercules Gas-Driven Pump

Crooked Hole Surveying Made Simple by Syfo Clinograph

"CROOKED HOLES" is a term practically new to the oil industry, though as far back as 1924 some California operators began to realize that their drills were not always making straight holes, for in that year Anderson had begun surveying wells, many of which he found to be crooked.

It was not until 1926 and 1927, however, that the entire industry awakened to the importance of the information which these surveys had revealed. Up to this time, bad conditions in some wells had been blamed on crooked holes, but these wells were acknowledged to be the exceptions among an overwhelmingly large number of straight holes. Such ideas were suddenly changed when some enterprizing producers and geologists, seeking an explanation for numerous dry holes and water wells, and having read of a few of the California surveys, placed the blame on crooked holes and proved their contentions by "acid bottle surveys."

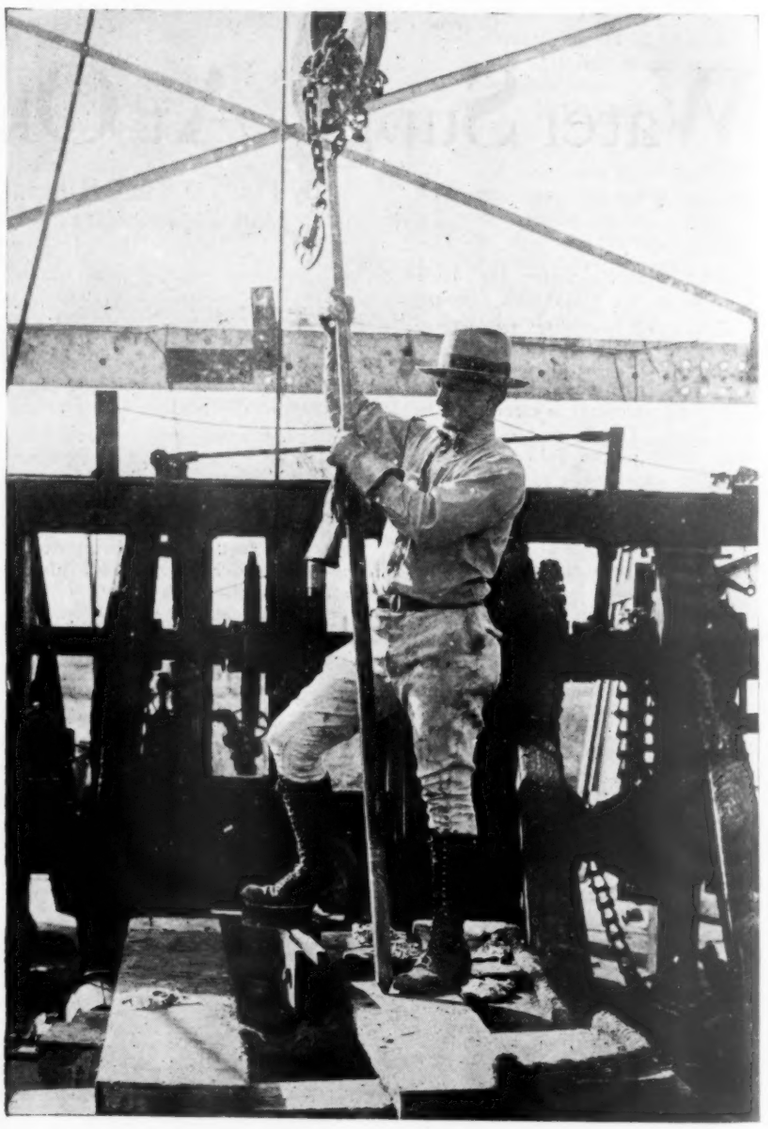
Since that time many and varied explanations have been given showing why many wells are drilled crooked. No one explanation was satisfactory, though all have contributed to the general answer. By 1927, some operators were doing as much as possible to drill straight holes, each in his own way, however. Careful study of the results of their efforts showed that those operators who had sacrificed speed by holding the weight off the bit were the most successful in drilling straight holes. Other operators, encouraged by the proof that with careful attention, straight holes could be drilled, began to check the deviation of their wells and to exercise more care in drilling.

Rapid advancement in straight-hole drilling technique showed that a hole starting crooked could be corrected provided the deviation was noticed soon enough. Consequently, daily tests by the acid bottle method were inaugurated by some of the companies.

Acid Bottle

In use, the acid bottle is filled about one-third full of a mixture of hydrofluoric acid and water, and is then placed inside a water-tight steel container closed at the top by a steel plug and copper gasket. In the earlier tests the container was placed in a section of the drill stem and the latter lowered into the hole to the point to be tested. The drill stem was allowed to stand for a sufficient time (generally about three hours) to etch the glass, thus showing the line of contact of the surface of the liquid with the walls of the bottle.

So much trouble was encountered and so much time was lost in these drill stem tests that operators soon began running the acid bottle in bailers while the drill stem was out of the hole, and in specially constructed containers attached to a steel measuring line and lowered into the hole through the drill stem. Such methods attained rapid popularity, especially with those companies who had previously refrained from the use of acid bottles on



Operator inserting the brass column into the outer casing, also shows size of the instrument and arrangement for lowering into hole

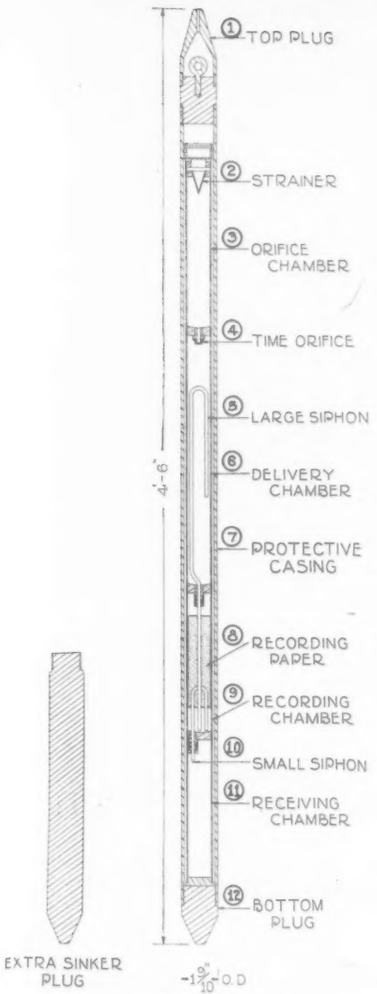


FIGURE 2

Shows graphically how recording fluid is siphoned to make record when instrument is at required depth, and still

account of the danger of sticking the drill stem.

Even at its best, however, the acid bottle method of surveying has always had some very serious defects.

The hydrofluoric acid used in those tests is handled with no particular care or attention by the field men, yet it is known to the chemists as one of the most dangerous acids. The men on the derrick floor, unless they are continually warned, amuse themselves by pouring acid on bugs and other insects, with consequent danger to themselves, not realizing that the burn of the acid is exceedingly painful and very slow to heal. Only a few companies realize the danger enough to keep antidotes prepared and ready on the derrick floor.

The acid is stored and shipped in wax containers which soften and melt in warm climates. It cannot be handled in large quantities safely, thereby necessitating frequent reordering. Companies operating in out-of-the-way places, or in foreign countries, find it practically impossible to secure the chemical. That is especially true in South American countries.

The glass bottles used in the actual tests are so subject to breakage that most engineers run two acid bottles to be sure of getting a reading. Acid from a broken bottle not only causes damage to the container but also makes the removal of the broken glass and chemical very dangerous. Hydrogen gas, formed by reaction of the steel and acid, builds up high pressures, which when the plug is loosened, expel the contents of the container with explosive force, endangering persons nearby.

Theoretically, the acid etches a smooth regular curve on the walls of the glass bottle, but the actual record, in most cases, is fringed with irregular striations along its entire length, thereby giving an effect of thickness. Irregularities in the curve are also caused by variations in the thickness of the cylindrical wall of the glass bottle, so that the engineer in reading the result must estimate the exact location of the curve.

Such readings are generally made with specially constructed goniometers which record by the alignment of a line, or plane, with the plane indicated by the etched curve of the acid bottle. Since the various irregularities mentioned above make correct results very difficult, at least three readings are taken, the average of which is reported.

Delay and Cost

Another point of dissatisfaction to the production men is that the results of the tests are not immediately available to the driller or production foreman. Either the driller guesses at the reading and goes ahead with drilling, or else he must wait to see if he must first straighten the hole. In either case, a great deal of the value of the test is lost.

The total cost for these acid bottle tests is comparatively high. The annual cost of one steel container, together with the acid and special bottles required for one test a day, is about $80.00. Antidotes, such as sodium carbonate, including pans or other containers, and rubber gloves, are probably equal in cost to the acid, etc. A further expense is a large storage compartment for filing used acid bottles.

The various defects, above enumerated, have given impetus to the design of various instruments to replace the acid bottle. A number of them have been put on the market and have met with varying degrees of success.

The greatest advancement in well surveying has been made possible by W. E.

(Continued on page 80)

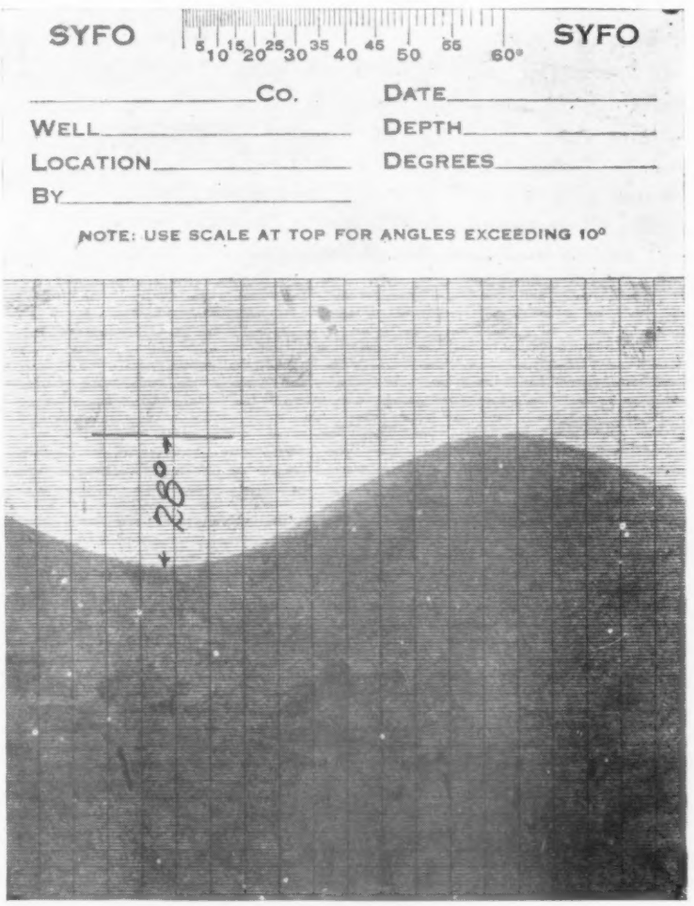


FIGURE 3

This cut is taken from an actual curve made by the instrument and is exact size

LETTERS

Fort Worth, Texas, July 19, 1930.

Editor The Oil Weekly,
Houston, Texas.

Dear Sir:

I notice from this week's Oil Weekly that The Oil Weekly is now favoring a gasoline tariff—now that the Standard bunch would like to see a tariff too.

Is it not a fact that both the Lago and the Shell, mentioned in your editorial in this week's Oil Weekly are heavily interested from an investment standpoint in the United States, and that some of the "Big American" interests are now favoring a tariff because they are losing business at home because of this competition?

And should we have a tariff on gasoline just because some of the "big boy" companies can't keep their domestic sales up in the face of competition?

SUBSCRIBER.

Dear Subscriber:

You ask a fair question, although some of your premises may be mistaken.

To start with, while THE OIL WEEKLY has printed both sides of the tariff controversy, and has never believed that a tariff would be a cure for the ills of the American oil man, and while THE OIL WEEKLY has printed articles from its own staff men, some of whom very humanly disagreed with the opinion expressed by other of our own staff men in this tariff controversy, THE OIL WEEKLY editorially and officially has believed for a considerable time that a tariff on gasoline had more chance of passage and probably would do as much good as a tariff on crude oil.

To begin with, there is every precedent for a tariff on a manufactured article, such as gasoline. In the second place there is every precedent to cause congress to take whatever steps possible to encourage American manufacturing.

Again, imports of a million barrels of gasoline equal imports of probably two and a half million barrels of crude oil.

As to whether the "Big Boys" are losing gallonage to the Shell or Lago interests at home as a result of these gasoline imports we are not informed. But certainly, gasoline can be laid down on the Atlantic seaboard (with no tariff) more cheaply than it can be produced in the United States and those companies so importing it have a distinct strategic advantage because of this fact.

Now, if it is seen that more money can be made on imported gasoline than can be made on domestic gasoline, and that the company importing it profits either to a much greater extent if the gasoline is sold at the same retail price as domestically refined gasoline, or be sold for less, then it is only a question of time until the "Big Boys" will begin importing their gasoline and instead of less than 2,000,000 barrels per month imported thus far this year, (by two companies) it will run two or three times that amount, and when that time comes *where will the American refinery, operating on domestic crude stand* and what will happen to the price of the crude delivered him by the American producer at home?

It doesn't take much of a prophet to see what the "Big Boys" will do and it doesn't take much of a prophet to forecast what will happen to the smaller American refiner and producer if these "Big Boys" do what they can do and what they have the money to do.

Think that over!

Very truly yours,

R. L. DUDLEY,
Publisher The Oil Weekly.

It Has Never Been Published Before

The Mid-Year Statistical issue of THE OIL WEEKLY, to be published August 1, will contain a complete geological and mechanical review of the Oklahoma City field—embracing data never before compiled and published.

For the first time, a complete record of the wells drilled, depth, marker formations, casing records, sand records, production data, etc., will be brought into one article, written by a staff man of THE OIL WEEKLY in collaboration with some of the outstanding engineers operating in the Oklahoma City field.

A special map, suitable for future reference, will also be a feature of this article.

Remember the date—August 1.

Remember the publication—THE OIL WEEKLY.

WORLD PETROLEUM IN REVIEW

WILDCAT IN POLAND*

Berlin.—Deutsche Petroleum A.G., has acquired oil prospecting rights in the parishes of Sieversen and Leversen, in the Harburg rural district. A deep hole has been in progress for some time, under the auspices of North European Oil Corporation, in the adjoining parish of Sottorf.

Muhlhausen, Thuringia. — A recent explosion, resulting in several fatalities, which occurred in the potash mine of Menteroda, near here, is attributed to petroleum which penetrated in the drifts. The oil is now being pumped off and brought to the surface in barrels.

This is the first indication of the presence of oil in this part of Central Germany, the hilly nature of which, however, may be favorable to the accumulation of important deposits, and reports of the quality and quantity will be awaited with interest.

Paris, France.—Statistics relative to the petroleum import trade of France show an increase of 310,251 tons for the first five months of the last year over the figures for the corresponding period of last year, the actual total being 1,451,111 tons and 1,140,860 tons. While the increase in the imports of crude oil accounts for no less than 173,119 tons, this increase is more apparent than real owing to differences in registering these statistics in the two years.

In May the total imports were 283,418 tons, as compared with 236,236 tons in May, 1929, and the chief imports were as follows: Motor spirit, 150,389 tons; crude oil, 43,635 tons; fuel oil, 34,282 tons; lubricating oil, 18,609 tons; illuminating oil, 9,841 tons; and gas oil, 8,842 tons. The chief increase, as compared with May, 1929, was 10,185 tons of motor spirit.

The value of these imports has risen from 970,181,000 francs for the first five months of 1929 to 1,288,657,000 francs for the corresponding period of this year.

*Limanowa Company's No. 62, by which it is hoped to extend the Mraznica field in a southwesterly direction.

Santiago, Chile. — National Mining Society has recently passed a resolution urging the government to build a refinery but no official action has been taken yet on the proposal. The source of crude supply of the proposed refinery was not disclosed.

Buenos Aires, Argentine.—Practically all wells of the Royal-Dutch group in the Comodoro Rivadavia field were shut in through 1929 and all drilling operations suspended. This action was taken after the permit granted the company to build a refinery at Buenos Aires had been withdrawn. The government recently withdrew its cancellation, and confirmed the original permit, which will enable the company to resume normal operations. It is said to have a potential production of 6500 barrels a day developed.

La Paz, Bolivia.—The Bolivian government proposes to send a commission to Argentina to undertake negotiations with the Argentine government regarding the laying of a pipe line through Argentine territory for the transportation of oil to be produced in Bolivia, east of the Andes.

Bucharest, Roumania. — The Roumanian ministry of industry and commerce on May 30, put into force the mining law providing that, whenever crude oil production exceeds the working capacity of the refineries, there may be free exportation of the ascertained surplus of crude by producers having no refineries. An association has been formed for that purpose.

Since the present crude production exceeds the working capacity of the refineries, the ministry of finance has authorized the association of producers to export 3,500,000 barrels of crude. It is estimated that exportation of this quantity will bring into the country more than $3,000,000 and in addition will stimulate refiners to increase their working capacity.

Paris, France.—Active encouragement for the drilling of oil in Morocco by the French government has led to the location of three wells by the tripartite consortium, one near Fez, one near Souk-el-Arba, and one near Quezzan. It is intended to drill to 6500 feet in each case for geological information.

Paris, France.—The recent reports of the Acieres et Usines a Tubes de la Sarre note the increase in the pipe business for 1929. Orders for pipe for the home market and the piping of towns has been unusually large with the long distance distribution of gasoline. The imports to Africa have been large due to the possibilities offered by public works. Orders from Rumania and Japan have also been very satisfactory.

La Paz, Bolivia.—An executive decree has been promulgated to supplant laws, decrees and regulations now in force, governing corporations. It became effective July 1, but is subject to legislative approval. These two provisions may lead to confusion. Until the text is available its effect on the oil industry cannot be appraised.

Ottawa, Canada.— Toronto-Canadian oil imports for May amounted to 2,362,211 barrels, or nearly double the total imports in May of last year.

Maracaibo, Venezuela.—Shell Petroleum Company in carrying out its program of expansion and establishment of a chain of filling stations throughout the country, has just finished another one of its modern and efficient stations in this city.

Berlin.—The North European Oil Corporation, American entrant upon the German scene, has entered upon the second phase of its development campaign by the commencement of four new wells situated at as many different points on the North German Plain. The company controls 2,200,000 acres of land surrounding salt domes and producing oil fields in the provinces of Oldenburg, Hannover, Mecklenburg, and Braunschweig. The company's first well, which, by the way, was

drilled with the first modern rotary rig ever introduced into Germany[1], was drilled in the Province of Oldenburg; and was completed in November of last year as a dry hole at a total depth of 4401 feet.

A second well is being drilled on the Sottorf Dome, between Oldenburg and Hamburg, where showings of oil have been obtained in earlier drillings of shallow depth. According to last reports, this test has reached 2600 feet.

Arrangement has been made with a German drilling contractor to drill a third well on the company's holdings near the Nienhagen field, in the Province of Hannover.

It has also become known that the company has recently purchased two rotary drilling outfits of latest design from Oil Well Supply Company, and it is understood that two other wells will be commenced as soon as this equipment is received.

Maracaibo, Venezuela.—The Federal and Cassation Court has given a decision in the case of the disputed territory of the Paez district, in the State of Zulia, in favor of the joint owners of the Gulf of Maracaibo Corporation. A decision of the Caracas Court gave the Maxudian Oil 170,000 acres of the 325,000 that were in dispute but the decision was reversed by the Cassation Court and has given judgment confirming title to the Gulf of Maracaibo Corporation.

Montreal, Canada. — Imperial Oil, Ltd., which is controlled by Standard Oil of New Jersey, will tie into the new pipe line running from Oklahoma to the north just below Toledo and will carry the oil to the refinery at Sarnia, Ontario.

Leningrad, Russia. — Advices state the geological department has discovered new oil occurences in the Caspian Sea near the town of Aktjubinsk. Indications are that the occurence is of the same order of maginitude as Baku and Grosny. The Soviet government is appropriating the necessary funds for development.

Sydney, Australia.—Companies drilling for oil in Queensland have recently gone to much expense in the purchasing of modern rotary plants for their drilling. The deputy chief government geologist says the purchase of this equipment was to expedite the search, and by the recovery of rock cores, to provide exact information as to the nature of the strata penetrated, besides revealing the dip in the strata. Residents of the Boonah and Beaudesert districts, on the coastal belt, have endeavored during the last year to discover oil by drilling at intervals but not much geological support has been given to the project.

[1]Exception must be made of rotary equipment manufactured in Germany for export to other countries; but German operators have never taken kindly to rotary equipment.

Bucharest (By Mail)—W. E. Wrather, consulting geologist, of Dallas, and E. C. McCarnes, field superintendent for Transcontinental Oil Company, of San Angelo, Texas, have left Bucharest after completing an investigation of

W. E. WRATHER
. . . *gone to Switzerland*

Trans-continental holdings in Roumanian fields. Wrather left for Switzerland, with the intention of going thence to Hannover District of Germany, and McCarnes left for New York, with the intention of returning immediately to San Angelo.

E. C. MCCARNES
. . . *coming home*

Constantinople, Turkey. — The new well of the Inter-Continent Petroleum Company of New York, according to latest advices has reached a depth of 200 feet and is progressing favorably. The company holds concessions of about 1,700,000 acres in this country and is preparing to start several new prospecting wells soon, encouraged by the favorable indications found in the few wells already being drilled. Four standard rigs have reached here from the United States along with 18,000 feet of casing and will be moved to two other locations, one in the district of Kastamuni and the other in the Diarbekir district.

Paris, France. — A bill to establish the refining of petroleum on a national basis in France came up for discussion July 8 in the chamber of deputies. The government plans to aid national production by requiring all private refineries to purchase 25 per cent of their production from a state subsidized company.

Trinidad.—Increased activities in the petroleum industry here are a result of the recent investigations of the islands resources which show that the deposits are much greater than were previously estimated. Prospects for a greater increase in operations during the next few weeks have given encouragement to the oil industry.

Bucharest, Rumania.—The Minister of Industry of France has expressed his favor of the efforts toward concentration and rationalization in the Rumanian petroleum industry and will lend every encouragement to the support of the new plans. He urged the Rumanian petroleum industry to limit its total production.

Bogota, Colombia.—The geologist in the Ministry of Industries has been commissioned to ascertain the deposits of petroleum and other similar products in the region of Alto Patia, between Popayan and the mouth of the Pacual River; likewise in the Department of Narino.

Emonton, Alberta.—Official reports of refineries and oil companies place the May production of the Turner Valley oil wells at 85,640 barrels.

Athens, Greece.—The Greek government has prepared a bill for the abolition of the petroleum monopoly, as it is persuaded that a new enactment with regard to the monopoly should be passed, the nature of which is not stated.

Bucharest, Rumania.—An offer was made recently by the Standard Oil Company and the Royal Dutch-Shell Company for the purchase of all the export surplus of Rumanian oil companies for the purpose of bringing Rumanian oil production into the line of control already instituted in most other parts of the world. Directors of all the principal home and foreign oil producers who met to discuss the offer accepted it in principal and declared their readiness to restrict drilling.

Palemborg, Sumatra.—Work on the fields of the Bataafsche Petroleum Maatschappij has relaxed since the beginning of the year, probably on account of the general over-production, and it seems probable that the company's wells could greatly increase their present output on demand. Price reductions on gasoline and kerosene occurred early in March on the part of both the Bataafsche and a rival company in the market, and for a time the demand for all oil products was much stimulated, but prices returned to their previous level after about two months. Accurate figures on production can not be obtained on account of the principle of secrecy on the part of the leading producing company.

The Official Oil Doctor Says:

The PETRECO TRADE-MARK *is your assurance of successful results!*

The Petreco trade mark on a piece of electrical dehydrating equipment identifies it as a product of Petroleum Rectifying Company of California, originators and developers of the electrical process of treating "cut oil." Back of apparatus bearing this trade mark stand twenty years of intensive experience—twenty years of satisfactory service—twenty years of outstanding success in the electrical dehydration of crude oil emulsions.

When you encounter "cut oil" problems, you are interested only in a proved method of treatment—not theories or promises. For your protection, therefore, tell the Oil Doctor your problems—in strictest confidence. He may be able to help you materially. At least it will cost you nothing to find out. Write today for a copy of Bulletin No. 30-3 which describes the Petreco Process in full detail.

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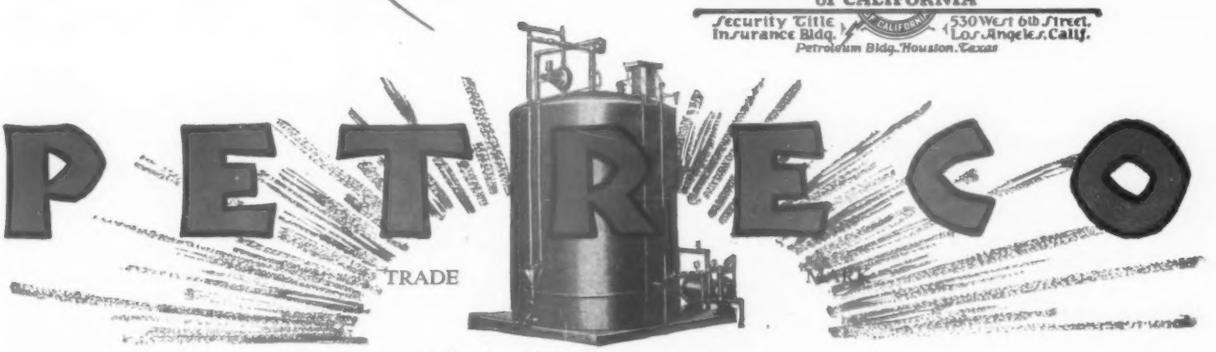
Petroleum Bldg. Houston, Texas



Fully Covered by Process and Apparatus Patents.

Development At Hobbs Now Going Forward Steadily

By H. H. KING
Staff Representative

HOBBS, New Mexico.—Development work in the Hobbs field is now on in full stride and will register a continuous gain in drilling activity until lease owners have one or more tests underway on each 40-acre unit within the oil producing area. Restriction of production from the 28 completed wells in the field to conform with proration rules previously endorsed by all operators and New Mexico officials became unanimous on July 16, and the three pipe line companies are limiting their takings to a combined quota of 35,000 barrels daily. The field is now assured more than 100 producing wells upon the completion of tests now underway, or authorized, while an even greater number will be needed to place all proration units within the proven area on production.

Enforcement of proration rules in the Hobbs field is to be carried out by C. G. Staley, who has been engaged as a full time umpire. Staley has been closely in touch with activities in the field through his duties as state geologist for New Mexico, and because of his qualifications was the popular choice of the proration executive committee as well as officials of New Mexico. Salaries and miscellaneous expense involved in applying proration will be borne entirely by producing companies in the Hobbs field, and will be proportioned on a basis of total number of barrels of oil produced monthly.

Field activity in the Hobbs area increased to 70 operations early this week through the addition of 13 new locations. Two completions on inside locations were scored within the past seven day period, including Geo. F. Getty Oil Company's McKinley 2, which gauged 873 barrels oil per hour, with principal oil pay at 4100-17 feet and 4162-93 feet. This well was drilled to 4202 feet, and had an estimated daily flow of 12,000,000 cubic feet of gas with the oil. Ohio Oil Company's State 1, Section 30-18s-38e, made 421 barrels per hour at 4040-4205 feet, with three-inch tubing lowered to 4190 feet. The gas flow in the latter well is rated at 8,000,000 cubic feet daily.

New locations given the Hobbs field within the past week were mostly confined to the southwest portion of Township 18, or on the north, east and west flanks of the most prolific section of the structure. This new work was restricted to old operators, and with few exceptions all the tests will be drilled with rotary equipment. Kirby Petroleum Company, Houston, averted joining the drilling rush in the field through having made a deal whereby Humble Oil & Refining Company will drill a free test on the former's 40-acre lease in northeast corner of Section 29-18s-38e. for a half interest and other considerations.

Entrance of Magnolia Pipe Line Company into the Hobbs field with an eight-inch carrier appeared promising early this week when the company began surveying route for an extension line from its tank farm, located southeast of Wink, Texas. Magnolia Petroleum Company does not hold protection acreage in the field proper, and it is quite probable that the line would

Steel derrick on Tidal Oil Company's Grimes 1, banner producer in the Hobbs field, being made ready to skid two locations north, with timbers thrown up around the Christmas tree for protection.

TWIN GIANTS
of this Stalwart Industrial Age

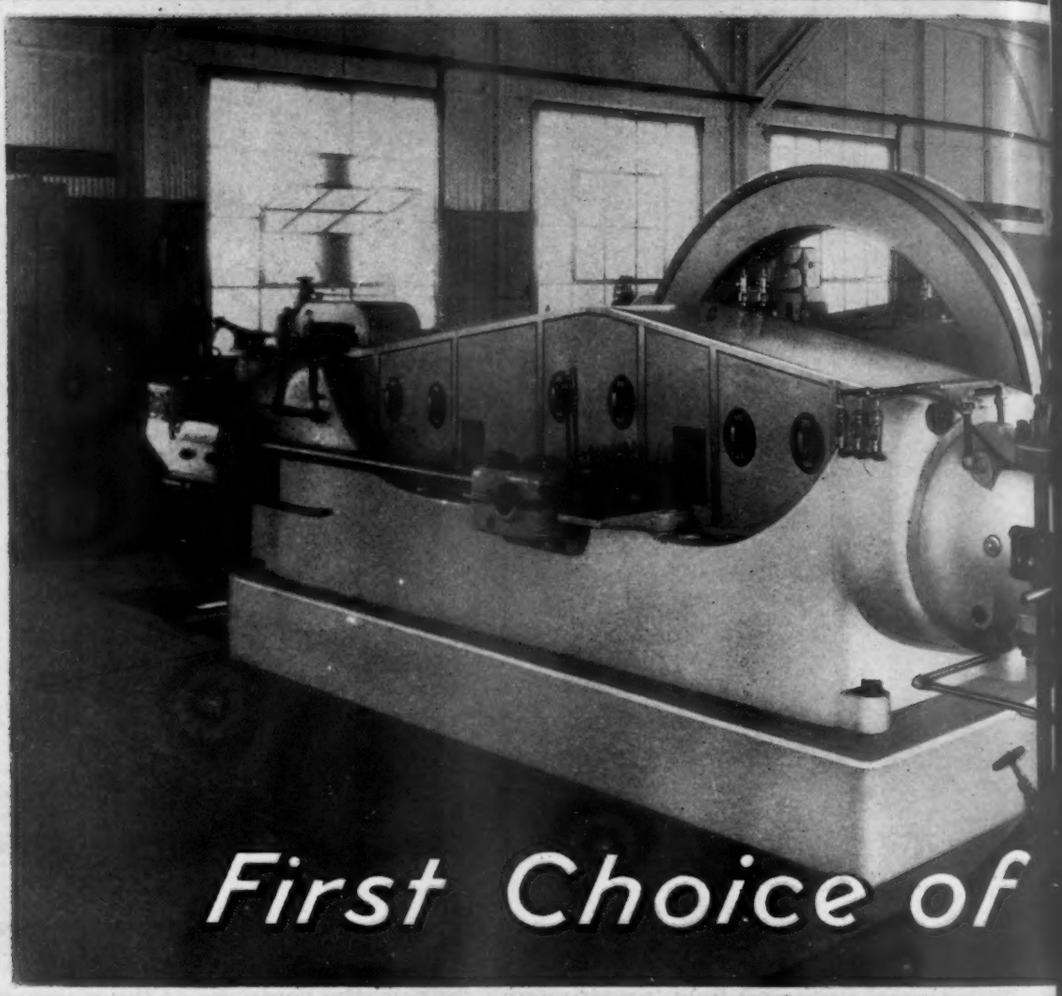
OIL and Electricity are symbols of this stalwart industrial age. They first meet in the oil field, pipe line and refinery. They supplement each other in great factories that are producing the things that enable the masses of people of our generation to have conveniences unknown to the kings of a few generations ago. We identify different ages in history as the stone age, the iron age, and so on. Truly, oil and electricity will ring down the centuries as the twin symbols of this industrial age, when science is revealing to man a glimpse of his latent possibilities. Nowhere do we see the giant, Electricity, to greater advantage than in the oil field, where he lends his hand in ushering a brother giant into this world.

Whether your purchase of new power will be immediate or remote, confer with our engineers, who are specializing in serving the producing, refining, and pipe line branches of the oil industry

GULF STATES
UTILITIES COMPANY

General Offices

BEAUMONT, TEXAS **LAKE CHARLES, LA.**



First Choice of

COOPER-BESSE

Five Type-80 four-cycle twins direct-driving gas compressors in the Sinclair Oil and Gas Company's station in the Oklahoma City field. Another Sinclair station houses 36 of these units.

"If they left it to me, I'd put the BLUE RIBBON on Type-80's every time!" That's the way many engine operators feel about these 170 B. H. P. compressor units. Type-80's are engineered with "big engine" thoroughness—reducing shut-down losses to a minimum.

Any Type-80 operator can point out to you many features which make these 4-cycle engines simple to inspect, adjust and repair, with little or no sacrifice of

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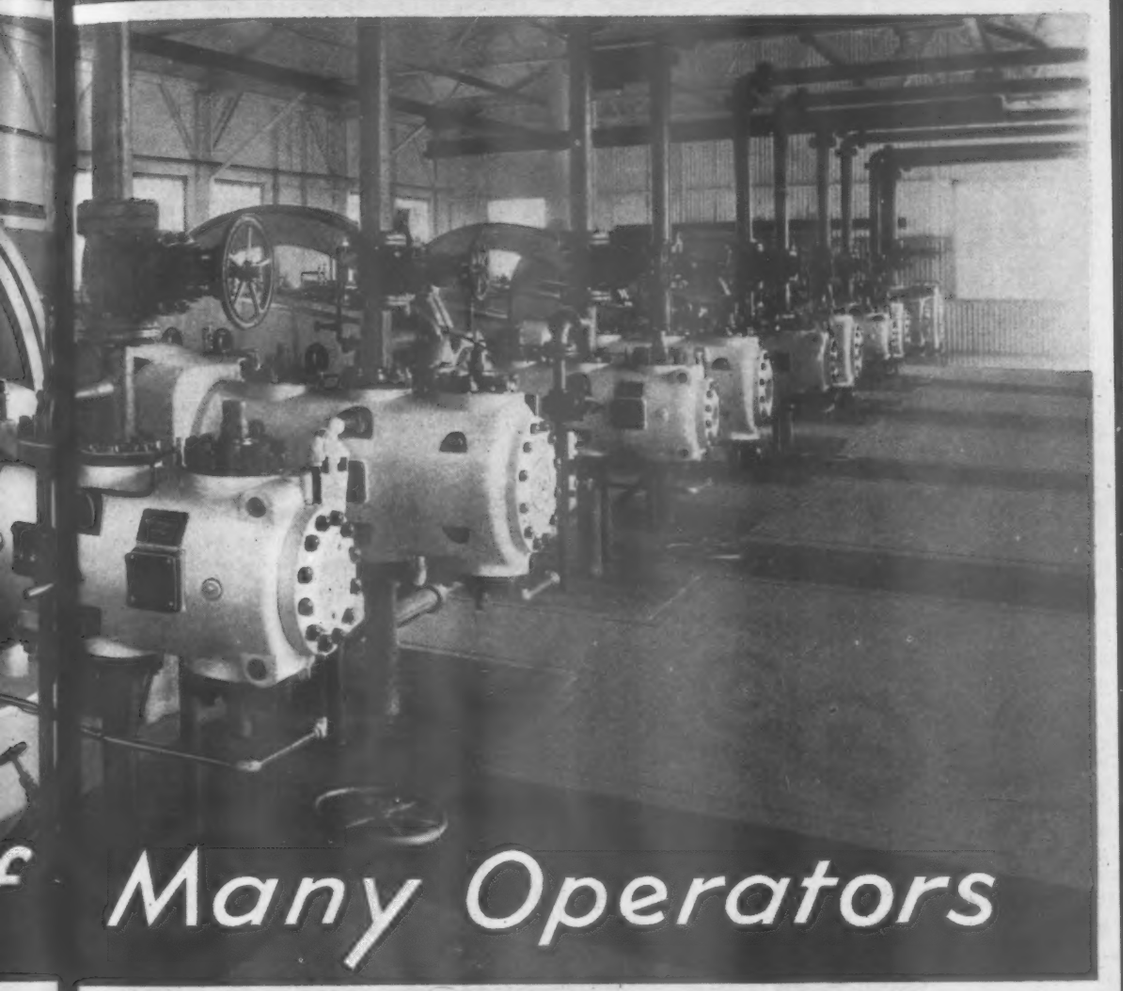


Many Operators

SSEMER TYPE 80

running time. All reciprocating parts are completely accessible. Indicator cards can be easily taken on both power and compressor cylinders — adjustments made (if needed) — and the engine put back on the load in record time.

If you would like to know about the many improved features of the new Type-80, ask us to send the illustrated Bulletin.

YOU'RE ALWAYS SAFE IN CHOOSING A COOPER-BESSEMER

Mount Vernon, Ohio, Grove City, Pennsylvania

HOBBS FIELD, NEW MEXICO, OPERATIONS

Operator—	Drilling Tests	Derricks and Rigs	Locations	Totals
Amerada Petroleum Corporation	4	1	..	5
Atlantic Oil Producing Company	1	..	..	1
The California Company	2	..	2	4
Continental Oil Company	3	3	..	6
Empire Gas & Fuel Company	.	2	..	2
Geo. F. Getty Oil Company	2	..	1	3
Gypsy Oil Company	2	2	..	4
Hobbs-High, Inc.	1	..	..	1
Humble Oil & Refining Company	7	1	..	8
Landreth Production Corporation—et al	2	1	..	3
Midwest Refining Company	7	1	2	10
Ohio Oil Company	.	1	..	1
Ohio-Independent Oil & Gas Company	2	1	..	3
Shell Petroleum Corporation	5	2	4	11
Skelly Oil Company	.	1	..	1
Sun Oil Company	1	..	..	1
The Texas Company	3	..	..	3
Tidal Oil Company	2	..	1	3
Total	44	16	10	70

be built to perform common carrier service for other operators, possibly Texas Unity Oil Company, which acquired an undivided one-half interest in leases and royalties owned in the field by Landreth Production Corporation, Fort Worth, for $500,000 cash and an additional $750,000 payable out of one-half the first oil produced.

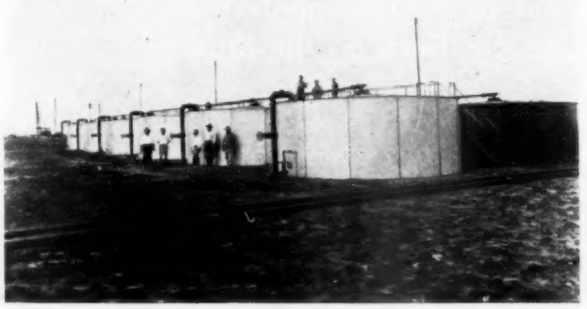
Crude sales contracts made prior to inauguration of a movement for proration of the Hobbs area by Amerada Petroleum Corporation and Empire Gas & Fuel Compay with Atlantic Pipe Line Company have been mutually amended to conform with proration. The former concern contracted to deliver 3,000,000 barrels of oil at maximum rate of 7500 barrels daily, while Empire Gas & Fuel Company contracted to deliver a maximum of 4500 barrels daily for one year.

Hobbs Meeting Held

The first official meeting of the Hobbs field proration executive committee was held in Roswell July 18, with Warner Clark, the California Company, Dallas, presiding. Clark is chairman of the committee, which includes: E. G. Allen, Shell Petroleum Corporation; L. E. Barrows, The Texas Company; H. C. Bratschneider, Midwest Refining Company; J. P. Cusack, Skelly Oil Company; John R. Suman, Humble Oil & Refining Company; Harry Walker, Walker Oil Corporation; Austin D. Crile, Commissioner of Public Lands for New Mexico, and the state geologist. The latter two are ex-officio members.

In addition to the selection of a proration umpire, this committee thrashed out minor details as to procedure to be followed by the proration staff in gauging wells, and starting dates for new wells placed on production. It was decided that new potential figures shall be taken on every well at 15-day intervals, and that new completions made in the field between proration periods must remain shut-in until the first or 15th of each month. This plan will have a tendency to cause operators to delay completion of wells until a day or two prior to the beginning of a new proration period. Since tankage and pipe line facilities are not available in sufficient quantities to permit wells to be given open flow tests for a full 24-hour period in arriving at potentials for proration purposes, the committee voted to flow wells open through tubing only for a period of three hours. The last two-hour period of this test will be multiplied by 12 to arrive at the estimated 24-hour, or daily potential flow.

A number of operators have since protested the committee's action in ordering that wells must be tubed with a three-inch pipe, and that all potential flows taken by the umpire for proration purposes must be through the tubing. Owners of wells known to be capable of producing in excess of 7500 barrels daily, and producers having a high gas ratio with the oil base their protests on the fact that a gauge through tubing only automatically limits the potential flow. It is estimated that no well in the field will register a daily potential flow under such a handicap as has been established in the field with wells flowing open through seven-inch casing and three-inch tubing. Some operators contend that 7500 barrels daily potential is near the maximum figure that can be expected of wells when their flow is confined to the tubing, while actual production tests of wells on open flow reveals two and three times such a figure. Therefore, the owners of wells in the 5000 to 10,000 barrel production class would obtain almost as great a production allowance as wells that are known to be capable of producing between 15,000 and 25,000 barrels daily. Most wells in the prolific section of the field are making an average of 10,000,000 cubic feet of gas with oil daily when flowed open, but some completions have been made with gas flow ranging from 20,000,000 to 40,000,000 cubic feet daily, and the latter would be penalized in testing production through tubing, as the gas would displace a large volume of oil.

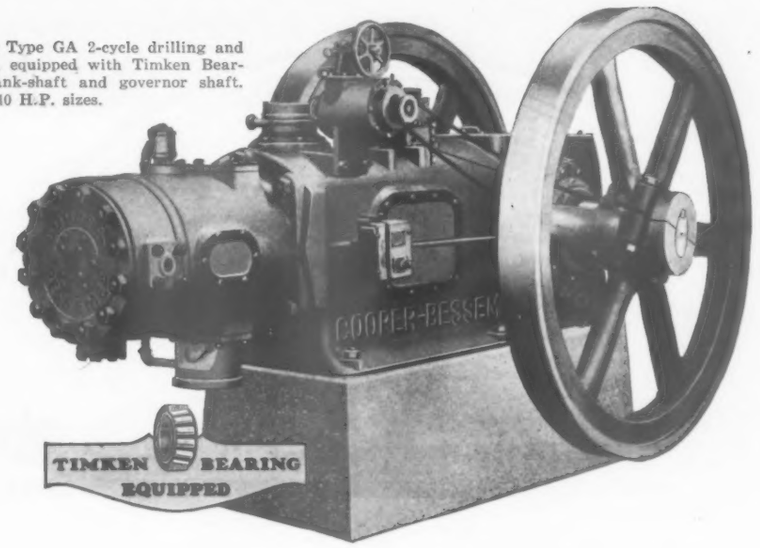


Battery of 12 500-barrel flow tanks, Tidal Oil Company's Grimes 1, Hobbs field.

Sun Announces Casing Program

Sun Oil Company has announced that the casing program on its H. D. McKinley 1 has been revised to conform with orders issued by the New Mexico authorities in regard to shutting off heavy gas production above the main oil horizon. A joint meeting of operators and representatives of the state's conservation department was held early last week, and resulted in a decision being made to set the last string of pipe, usually seven-inch, about 100 feet lower than has been customary in the past. Sun Oil Company planned to set its oil string at about 3875 feet, but will cement the pipe about 100 feet lower. This test was drilling below 3955 feet at last reports. A lower casing seat in the prolific section of the field is expected to cut down the volume of gas accompanying the oil flow, thereby prolonging the flowing life of the field. Data now available indicates that wells can be cased down to about 4000 feet without shutting off oil saturated lime in commercial quantities.

Combination rigs are being used by contractors engaged in drilling The Texas Company's three tests in the Hobbs field, and such procedure has resulted in a substantial saving in boiler fuel, rotary mud expense and labor on the first test to reach the final casing point. The Texas Company's State 1-C, located in the northwest end of the field is being drilled on contract by Disney-Gholson-Dutton, Ranger contractors, at a flat price per foot. Rotary was used to the 2750-foot casing point because such equipment afforded fast drilling progress; then cable tools were installed to drill through the main gas horizons to 3969 feet, where a string of 6¼-inch casing was cemented. The usual heavy volume of gas was not encountered in this test; but little difficulty was experienced in negotiating the gas horizons by using the Alex Fields type of control head.



Cooper-Bessemer Type GA 2-cycle drilling and pumping engine, equipped with Timken Bearings on the crank-shaft and governor shaft. Built in 30 and 40 H.P. sizes.

Cooper-Bessemer Type GA Two-Cycle Gas Engines Have Timken-Equipped Crank-Shafts

When a manufacturer sees fit to entrust the performance of a new piece of machinery to Timken Bearings after several years' experience with them in other equipment, it is evident that both he and the users of his products are thoroughly "sold" on Timken advantages.

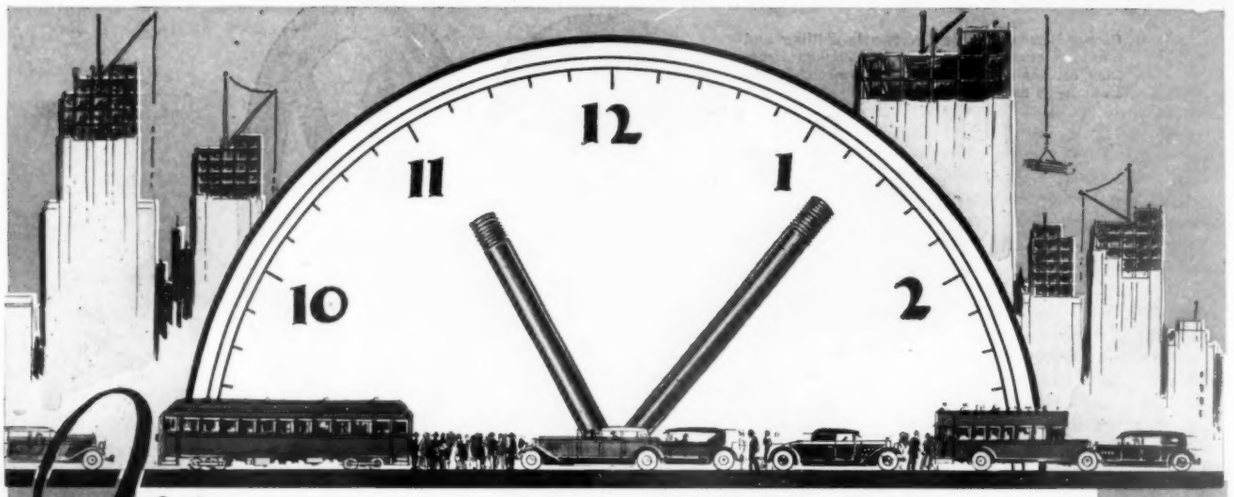
This is the situation with The Cooper-Bessemer Corporation, Mount Vernon, Ohio, builders of gas engines and compressors.

As explained in their own words, "In more than three years' experience with Timken Bearings in our Type-16 engines, we do not know of a single case of bearing trouble of any kind. The same applies to our Timken Bearing Equipped four-cycle pumping engines which have been running for the past two years. Because of this experience we feel justified in adopting Timken Bearings as standard for main bearings and governor shaft on our Type GA Engines."

Builders of all types of gas and steam engines for oil-field service have adopted Timkens for crank-shafts, governor shafts and other positions. They have found that not only is friction eliminated, power increased and lubrication economized, but through the exclusive combination of Timken tapered construction, Timken positively aligned rolls and Timken-made steel, shafts are rigidly held in alignment, whip prevented, vibration minimized and engine life indefinitely prolonged.

THE TIMKEN ROLLER BEARING CO., CANTON, OHIO

TIMKEN *Tapered Roller* **BEARINGS**



Minutes LOST *mean*
DOLLARS LOST!

Nowadays when new pipe arrives at the job with battered ends and burred threads causing rethreading and unproductive labor, WHO IS TO BLAME?

Of course the threads *were* in perfect condition when they left the pipe mill but the pipe was *not* Colona Protected.

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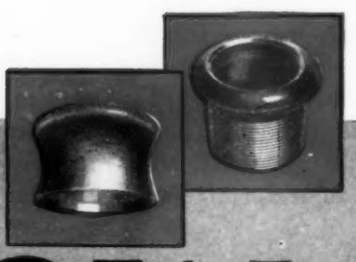
The simplest, most certain way of eliminating new pipe thread trouble is to SPECIFY COLONA PROTECTED PIPE in your order requisitions.

PITTSBURGH SCREW & BOLT CORPORATION
Colona Division · Pittsburgh, Pa.



COLONA PIPE THREAD PROTECTORS

Standard-Sinclair Deal Involves $72,500,000 Cash
(Continued from page 33)

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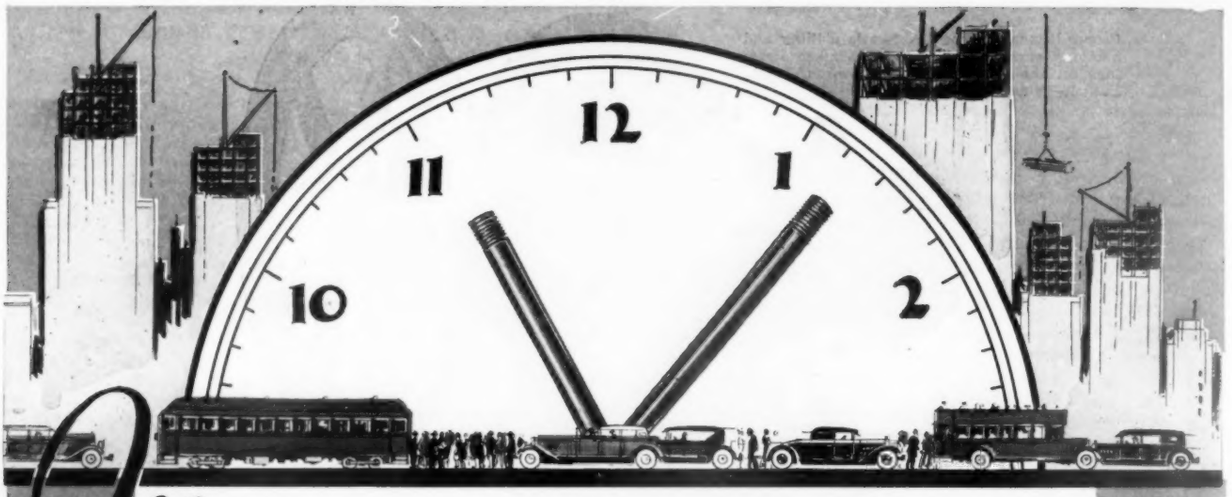

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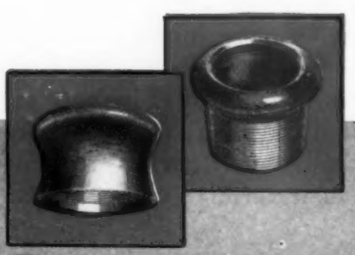

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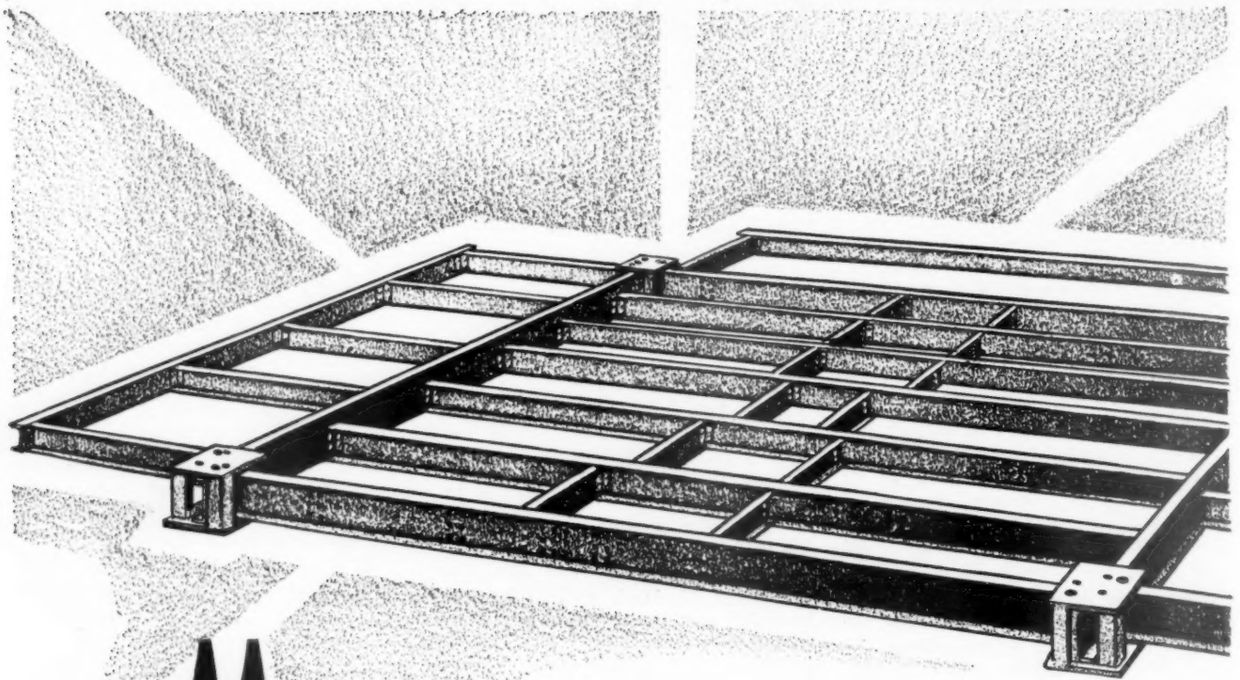


Moore BASES & EXTENSIONS

AS GOOD AS THE CHAMPION DERRICK

Steel derrick bases, set on concrete, supply durability and security not found in wooden construction. For heavy work, and where long life is expected, Moore Steel Bases and Extensions offer decided economy.

Moore Bases are made in several weights, from light pumping types up to extra heavy rotary drilling bases. A.P.I. standard sizes from 19 feet 1⅜ inches to 26 feet are supplied. Interior channel arrangements vary according to the application. Punching is A.P.I. standard.

There are steel extensions for dog house, forge shop, bull wheel house, rotary engine house and slush pump house. Moore Steel Bases and Extensions are shipped either galvanized or painted.

Moore

ALL STEEL RIG EQUIPMENT

LEE C. MOORE AND COMPANY, INC.

PITTSBURGH Established 1907 TULSA

New York Offices: Oilfield Equipment Company, 30 Church Street, New York, N. Y.

DALLAS, TEXAS WICHITA, KANSAS CASPER, WYO.

SHREVEPORT, LA. HOUSTON, TEXAS

Stocks in All Principal Fields

Markets--Production--Crude Prices

H. J. STRUTH, *Staff Economist, Houston, Texas*

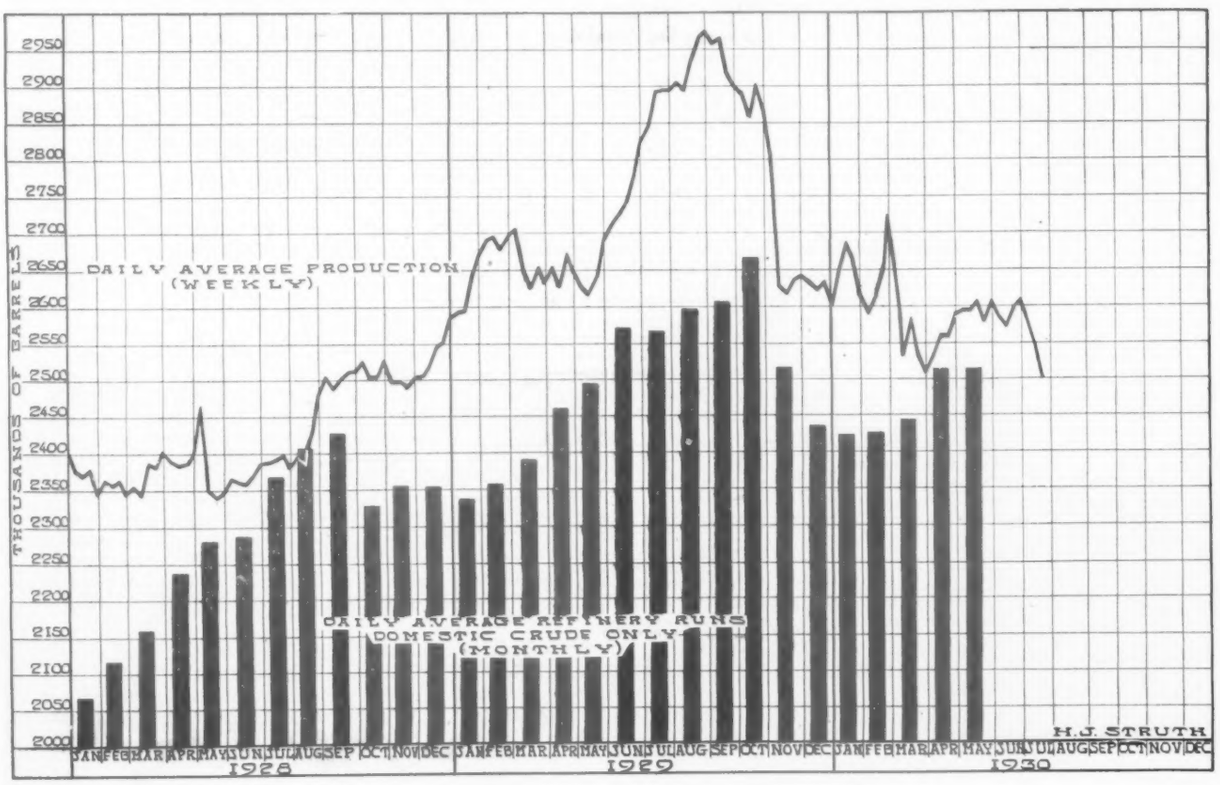
Production at Lowest Point Since December, 1928

ANOTHER decline in daily crude production last week brought the curve down to the lowest point since the early part of December, 1928. The total is now only 100 barrels above the 2,500,000-barrel mark, representing a decline for last week of 30,700 barrels. On the whole, this represents a remarkable achievement for the industry, as production is now down more than 470,000 barrels daily from the peak established last August. The fact remains, however, that it will be necessary for the industry to effect further curtailment to the extent of at least another 100,000 barrels daily before absolute equilibrium is attained.

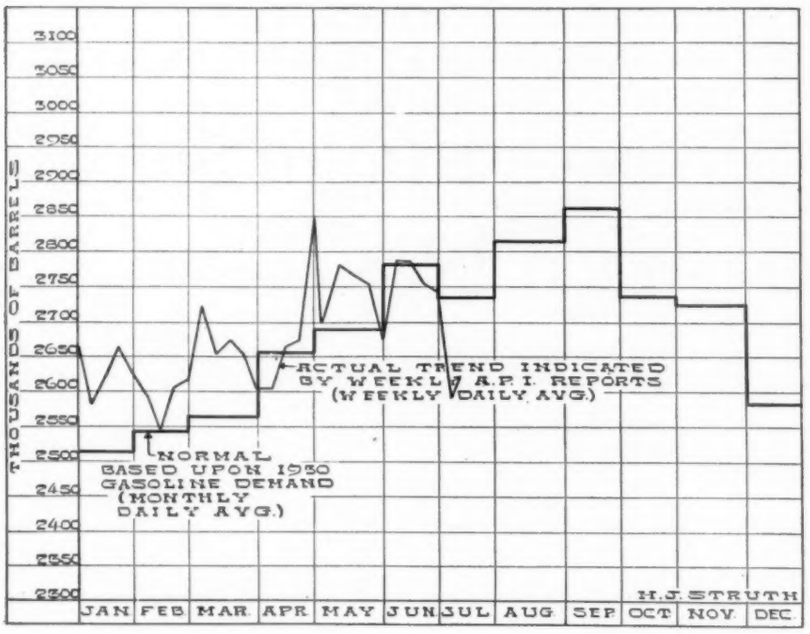
Production declines last week aggregated more than 48,000 barrels but gains recorded in California, Rocky Mountain and Eastern states offset this to the extent of more than 17,000 barrels daily. Oklahoma, Kansas and Texas, outside of the Gulf Coast, registered a combined decrease in production of 47,400 barrels, which was further augmented by small declines in the Gulf Coast, North Louisiana and Arkansas. The Seminole area and the Oklahoma City pool were mainly responsible for the decline in Oklahoma, which amounted to 29,700 barrels. The Voshell pool, in Kansas, was sharply lower last week, the decline there amounting to 8900 barrels while the total production of the state declined 11,750 barrels.

Gray County, Burkburnett, Wilbarger, Ector and Yates, in Texas, recorded declines in production that accounted for a total decline in the area outside of the Gulf Coast amounting to 5950 barrels daily. The Gulf Coast, North Louisiana and Arkansas registered declines of 500, 150 and 100 barrels, respectively. The Rocky Mountain area contributed a gain in production of 14,900 barrels daily, while Eastern states and California re-

DOMESTIC PRODUCTION AND REFINERY RUNS



RUNS OF CRUDE OIL TO STILLS



ported gains of 750 and 1800 barrels, respectively.

Revise Buying Schedules

It will be noted that while production has been markedly reduced, particularly in Oklahoma, it has been necessary to revise the production quota to take care of recent revisions in buying schedules. With the latest allowable figure placed at 550,000 barrels, Oklahoma is still faced with an excess production of 36,300 barrels. This has also necessitated a revision in the United States quota, which has been reduced to 2,393,000 barrels. The status of daily crude production now shows an excess of 106,493 barrels daily. About 100,000 barrels of excess production is now distributed between California, Kansas, Oklahoma, Texas, Louisiana and the Rocky Mountain states.

The situation in California continues unchanged, with production hovering about 20,000 barrels above the allowable output of the state. Long Beach and Elwood are the leading fields from which further curtailment action is expected. In the meantime, the Playa del Rey field is becoming an all-important factor that may play havoc with the California crude market in the near future. With the settlement of the gasoline price war in California, there is a better feeling and it is believed that more attention is now being given to the necessity for curtailment of both crude oil production and refinery run schedules.

Stocks of every petroleum product in California were reduced during June, with the exception of heavy crude, including fuel oils, according to the monthly report compiled by the San Francisco office of the American Petroleum Institute. The total net decline in stocks was 3,389,282 barrels.

Stocks of refinable crude, 20 gravity and above, were reduced 1,886,476 barrels to a total of 41,863,482 barrels, during June. Gasoline stocks were reduced 1,534,174 barrels to a total of 17,108,859 barrels. Other miscellaneous stocks were reduced small amounts, while heavy crudes, including all grades of fuel oils, increased 259,026 barrels to 113,036,486 barrels.

During June, 80 new rigs were erected in California, against 75 in May. At close of month, total of 410 wells were drilling, compared with 431 wells in May. Long Beach leads all fields in the state with 85 wells drilling, 13 new rigs having been erected during June. Total of 9446 wells were actively on production last month against an average on production in 1929 of 10,550 wells. In 1925, the average number of wells on production during year was 11,383. This gives an idea to number of wells completely shut in.

California's Production Off

California's daily average production during June was 600,693 barrels, against 614,337 barrels in May, and compares with 820,821 barrels in June, one year ago.

The necessity for lowering pipe line runs in Oklahoma and Kansas has had a marked effect upon the production situation. This action has proven to be a saving grace for the industry there, since the widening margin between supply and demand had begun to foreshadow another cut in the crude market. Through a combination of circumstances it appears that the Mid-Continent crude market has

CRUDE RUNS TO STILLS, GASOLINE AND GAS AND FUEL OIL STOCKS, WEEK ENDING JULY 12, 1930

(Figures in barrels of 42 gallons)

District—	Potential Daily Capacity	Potential Capacity Reporting Total	Potential Capacity Reporting Per Cent	Crude Runs to Stills Total	Crude Runs to Stills Daily Average	Crude Runs to Stills Per Cent Operated	Gasoline Stocks	Gas & Fuel Oil Stocks
East Coast	608,700	608,700	100.0	3,325,000	475,000	78.0	7,743,000	9,361,000
Apalachian	128,100	117,600	91.8	580,000	82,900	70.5	1,589,000	924,000
Indiana, Illinois, Kentucky	382,500	381,000	99.6	2,222,000	317,400	83.3	7,825,000	4,267,000
Oklahoma, Kansas, Missouri	462,200	415,700	89.9	1,950,000	278,600	67.0	4,189,000	4,785,000
Texas	788,000	712,700	90.4	3,814,000	544,900	76.5	6,982,000	10,462,000
Louisiana-Arkansas	270,600	262,000	96.8	1,233,000	176,100	67.2	2,191,000	1,834,000
Rocky Mountain	148,900	139,300	93.6	437,000	62,400	44.8	2,623,000	1,199,000
California	897,400	891,400	99.3	4,016,000	573,700	64.4	14,650,000	106,253,000
Total Week July 12	3,686,400	3,528,400	95.7	17,577,000	2,511,000	71.2	47,792,000	139,085,000
Total Week July 5	3,686,400	3,528,400	95.7	17,348,000	2,478,300	70.2	49,034,000	139,138,000
The total U. S. figures for last year, showing immediately below, are not comparable with this week's totals because of differences in percentage capacity reporting.								
Total July 13, 1929	3,338,600	3,038,100	91.0	18,011,000	2,573,000	84.7	*38,164,000	*135,353,000
The Texas and Louisiana Gulf Coastal Figures Shown Below Are Included Above in the Totals of Their Respective Districts.								
Texas Gulf Coast	526,500	526,500	100.0	2,783,000	397,600	75.5	5,860,000	7,463,000
Louisiana Gulf Coast	147,500	147,500	100.0	822,000	117,400	79.6	1,812,000	1,011,000

*Final Revised 1929.

been temporarily strengthened — at least sufficiently to prevent the necessity for further price-cutting. Similarly, refiners throughout the Mid-Continent area have bent more strenuous effort toward curtailment of still runs in an effort to prevent further demoralization of the gasoline market.

Occasional declines in production of the various flush areas of Texas have helped to some degree but it is evident that coordinated effort in the direction of curtailment must be exercised before there will be any improvement in the supply situation of this state. While the accompanying table shows that Texas' excess production is only about 28,000 barrels daily, it is apparent that any effort to reduce above-ground supplies must involve a reduction in output of almost 100,000 barrels daily. If definite action is taken by operators to reduce production in Texas, it is readily seen that at least another 50,000 barrels must be added to the excess figure shown, which would bring the total excess up to more than 78,000 barrels daily. Notice has been given to producers, purchasers and transporters by the Railroad Commission of Texas to the effect that there will be a public hearing at Austin at 10 o'clock, July 30, 1930, at which time the commission will take up and consider the application of producers to effect some form of curtailment of crude production within the state. Since there is sufficient evidence to signify that a majority of producers in Texas are willing to abide by a reasonable proration agreement, it is believed that any favorable action taken by the Railroad Commission will start the ball rolling in the right direction in the near future.

If we consider all factors in the crude situation, taking into account the fact that a considerable excess production has been accumulated since the first of the year, it is apparent that the national daily production of crude must be reduced to a maximum figure of not more than 2,400,000 barrels. If that figure is attained and held for the balance of this year, there is every reason to believe that stocks of crude will be reduced at least 20 million barrels this year. Getting production down to its present level has undoubtedly saved the industry from complete market demoralization, but in order to bring about any improvement in the market structure it will be necessary to reduce output at least another 100,000 barrels daily.

Gasoline Stocks Off

As a direct result of much needed curtailment in refinery still runs, gasoline stocks are at last beginning to show some signs of diminishing. On July 19, according to the American Petroleum Institute, stocks of gasoline aggregated 45,937,000 barrels, a decline of 1,855,000 barrels from the preceding week. This is the best showing made in the gasoline supply situation this year. Runs to stills for the week ending July 19 aggregated 17,122,000 barrels, a daily average of 2,446,000 barrels. Corrected to a 100 per

HOW LAST WEEK'S DAILY AVERAGE PRODUCTION COMPARES WITH NECESSARY AND NORMAL QUOTA LIMIT

	Necessary Daily Average 3rd Quarter 1930	Quota Limit Prescribed to Correct Previous Excesses	Actual Daily Average Week Ending July 19 1930	Excess
Arkansas	62,431	62,431	55,500	—6,931
California	664,149	594,000	614,900	20,900
Kansas	120,222	105,554	116,300	10,746
Louisiana	60,116	58,749	65,200	6,451
Oklahoma	669,115	550,000*	586,300	36,300
Texas	839,361	792,621	821,100	28,479
Balance of U. S.	230,000	230,000	240,800	10,800
Total	2,645,394	2,393,607	2,500,100	106,493

*Revised to meet lower purchasing schedules.

IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

(Barrels of 42 gallons)

	Week Ended July 12		Week Ended July 5
ATLANTIC COAST PORTS—			
Baltimore	231,000		202,000
Boston	7,000		31,000
New York	1,315,000		841,000
Philadelphia	338,000		293,000
Others	287,000	"A"	419,000
Total	2,178,000		1,786,000
Daily Average	311,143		255,143
AT GULF COAST PORTS—			
Galveston District	.....		.....
New Orleans & Baton Rouge	30,000		142,000
Port Arthur & Sabine District	.....		.....
Tampa	.....		35,000
Total	30,000		177,000
Daily Average	4,286		25,286
AT ALL UNITED STATES PORTS—			
Total	2,208,000		1,963,000
Daily Average	315,429		280,429
Daily Average Four Weeks Ended	283,500		277,321
Distribution of Total Imports is as Follows:			
Crude	1,586,000		1,186,000
Gasoline	.....	"A"	381,000
Gas Oil	.....		17,000
Fuel Oil	395,000		379,000
Total	2,208,000		1,963,000

CALIFORNIA OIL RECEIPTS AT ATLANTIC AND GULF COAST PORTS

(Barrels of 42 gallons)

	Week Ended July 12		Week Ended July 5
AT ATLANTIC COAST PORTS—			
Baltimore	81,000		85,000
Boston	.....		.....
New York	298,000		334,000
Philadelphia	.....		280,000
Others	.....		.....
Total	379,000		699,000
Daily Average	54,143		99,857
AT GULF COAST PORTS—			
Total	72,000	"A"	55,000
Daily Average	10,286		7,857
AT ATLANTIC AND GULF COAST PORTS—			
Total	451,000		754,000
Daily Average	64,429		107,714
Daily Average Four Weeks Ended	76,750		75,107
Distribution of Total California Oil Receipts is as Follows:			
Gasoline	451,000		699,000
Kerosene	.....	"A"	55,000
Total	451,000		754,000

"A"—Revised.

Summarized Review of Field Results

State—	Completions This week	Completions Last week	Oil Wells This week	Oil Wells Last week	Gas Wells This week	Gas Wells Last week	Failures This week	Failures Last week	Initial Prod. This week	Initial Prod. Last week
Arkansas	3	3	2	..	..	..	1	3	200	..
California	11	22	11	16	..	..	..	6	9,070	13,325
Illinois	3	2	3	2	..	..	..	..	21	185
Indiana	9	2	1	..	2	..	6	2	60	..
Kansas	10	23	6	13	..	1	4	9	3,055	4,834
Kentucky	42	17	25	8	6	1	11	8	1,298	315
Louisiana	22	20	11	8	5	5	6	7	5,946	600
Michigan	3	2	3	..	..	..	..	2	1,050	..
Mississippi	4	1	..	..	3	1	1	..	..	..
New Mexico	2	3	2	3	..	..	..	..	30,100	12,275
New York	7	9	7	9	..	..	..	..	15	32
Ohio	35	52	12	25	14	18	9	13	544	838
Oklahoma	72	83	37	52	10	11	25	21	99,869	178,212
Pennsylvania	46	54	42	43	1	..	3	7	160	265
Tennessee	..	1	..	..	..	8	..	..	..	..
Texas	158	156	85	90	9	6	64	55	55,555	51,627
West Virginia	3	7	2	1	1	8	..	..	60	10
Total	430	457	249	270	51	70	130	133	207,003	262,518
Increase this week	..	..	..	..	..	..	..	..	..	..
Decrease this week	27	..	31	..	29	..	3	..	55,515	..

cent basis, this places the total still run figure at about 2,556,000 barrels, or a decline from the preceding week of 66,000 barrels. Judging from the demand outlook for gasoline for the balance of this year, it is believed that a further decline in still runs of, say, 30,000 barrels daily would readily offset the excess production since January 1 and place the industry in a much stronger market position in the near future.

Following are the more important changes in crude production reported by the American Petroleum Institute for the week ending July 19:

		Barrels
Gray County	Decrease	1,000
Burkburnett	Decrease	1,700
Electra	Increase	1,700
Wilbarger	Decrease	1,050
Ector	Decrease	1,300
Yates	Decrease	2,650
Refugio	Increase	3,100
Carr City	Increase	2,600
Logan County	Decrease	1,450
Seminole	Decrease	4,450
Bowlegs	Decrease	1,250
Searight	Decrease	1,000
Little River	Decrease	3,450
East Earlsboro	Decrease	7,000
Scholem-Alechem	Increase	1,100
St. Louis	Decrease	1,300
Allen	Decrease	1,600
Oklahoma City	Decrease	9,350
Sasakwa	Decrease	1,200
Konowa	Increase	3,950
Long Beach	Increase	2,000
Elwood	Increase	1,500
Voshell	Decrease	8,900
Salt Creek	Increase	3,250
Lea and Eddy Cos.	Increase	9,850

Magnolia Test Gasoline Line

Dallas, Texas.—Natural gas was used by Magnolia Petroleum Company in testing its recently completed 31¼-mile three-inch welded line, which is to transport commercial gasoline from the company's two refineries at Fort Worth to Dallas. A pressure of 200 pounds was used in testing the lime with gas, and the pressure remained constant, except for a drop of about five pounds overnight due to change in temperature. Gas was also used by the company for testing its 50-mile three-inch welded line that transports gasoline from Luling to San Antonio. The latter has been in operation since June 8. The Fort Worth-Dallas unit is rated at 3000 barrels daily capacity, and will be placed in operation shortly.

Howard-Glasscock Leases On Part Payment Plan

Big Spring, Texas.—Cosden Oil Company applied a part payment plan on all lease connections in the Howard-Glasscock County district effective 7 a.m., July 20, in order to curtail crude takings. The company is the largest market outlet for prorated oil in the district, having nominated 7000 barrels daily, but due to other buyers not taking their regular quota, crude deliveries to Cosden Oil Company have been ranging from 8000 to 8300 barrels daily. Until further notice the company will pay for 50 per cent of oil run, and run the remainder to its storage for the account of the producer. A storage charge of one and one-half cents per barrel monthly will be applied to the prorated oil.

Re-conditioning work is taking place on several units of Cosden Oil Company's refinery at Big Spring, thus causing a slump in crude requirements, while the company has also supported the general campaign to curtail gasoline production. In addition to handling the above volume of local crude, the company is absorbing its current production in the Judkins field, Ector County, amounting to about 3000 barrels daily.

Weekly Comparisons of Permits Granted for New Wells

States—	Week Ending July 18	Previous week	This week 1929	Total this month	This month 1929	Total this year	Total this date last year	1929 year total
Arkansas	1	..	2	2	17	60	86	159
California	18	14	24	53	61	450	765	1,231
Louisiana	16	27	10	57	58	609	474	903
Kansas	6	15	30	42	96	596	591	1,079
Oklahoma	80	81	118	232	354	1,935	1,881	3,578
Texas	176	137	161	436	546	4,599	4,793	8,697
Total	297	274	345	822	1,132	8,249	8,590	15,647

THE LOWLY NAPKIN

TEACHES A DAILY LESSON IN GUIBERSON CATCHER TUBING PROTECTION

Napkins protect us from soiled clothing and their popularity may be seen by the way people demand them from forgetful waiters. For, careful as we can be, accidents will happen, and woe be to the one who has nothing below.

It is this tendency toward precaution in everybody which is responsible for the popularity of the Guiberson Tubing Catcher. The Guiberson Tubing Catcher, suspended at the foot of a string of tubing, in the event of an accident, will stop the falling tubing within three inches. Dove-tail tracks guide the slips instantly and accurately to the casing walls. Strong spring operates with or without fluid in the hole. Heavy striker weight overcomes the retarding action of mud or paraffin

Fully patented

Suspending a string of tubing without the Guiberson Tubing Catcher at the bottom is something like eating a bowl of Indelible Raspberry Custard over a $5,000 pair of white pants *without a napkin.*

"Better Be Safe Than Sorry"
THE GUIBERSON CORP.
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California Branch: 1506 Santa Fe Ave., Los Angeles
621 Kennedy Bldg. Tulsa — 321 S. Osage St. Ponca City — 506 Trust Bldg. Newark, O.

GUIBERSON

BETTER BE SAFE THAN SORRY

United States Daily Average Production

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision:

1929	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Daily Av.	United States Total
May	679,650	115,400	651,100	150,350	35,350	71,500	114,150	72,850	749,250	2,639,600	81,827,600
June	685,200	120,750	688,200	147,500	35,700	70,050	116,750	72,000	827,200	2,763,400	82,902,250
July	722,050	124,250	718,950	148,150	35,750	68,650	122,000	74,250	874,850	2,888,900	89,555,250
August	728,100	127,950	750,750	153,100	36,300	66,900	126,600	77,900	873,300	2,940,900	91,167,250
September	714,050	128,450	741,200	156,600	37,050	65,300	137,250	78,600	874,850	2,933,350	88,000,650
October	673,600	113,400	714,550	167,050	39,700	64,550	137,400	77,950	876,600	2,864,800	88,809,500
November	640,300	110,050	702,350	171,350	36,750	63,700	135,400	76,550	706,500	2,642,800	79,285,050
December	650,000	111,600	687,850	161,350	38,700	61,850	140,650	76,150	698,200	2,626,350	81,417,000
1930											
January	671,050	111,700	672,650	178,300	37,650	58,500	142,250	73,850	688,850	2,634,800	81,574,650
February	631,900	111,400	654,600	199,950	39,450	58,400	135,050	74,850	746,550	2,652,150	74,280,200
March	622,650	115,500	644,400	206,000	41,600	58,600	132,700	73,600	649,000	2,544,050	78,865,400
April	657,050	122,200	640,950	206,800	42,100	57,800	138,700	75,950	625,700	2,576,250	77,018,100
May	663,300	131,000	662,350	203,900	39,900	53,800	137,150	82,500	623,700	2,597,700	80,529,600
June	665,550	133,600	668,300	210,500	40,300	56,900	135,750	84,600	598,000	2,593,500	77,806,900
July 5	655,900	131,650	657,900	205,950	40,059	55,350	136,950	94,250	603,500	2,581,500	18,070,500
July 12	616,000	128,050	643,550	209,800	39,550	55,600	138,100	87,050	613,100	2,530,800	17,715,600
July 19	586,300	116,300	637,600	209,300	39,400	55,500	138,850	101,950	614,900	2,500,100	17,500,700
Increase	.....	.....	.....	.....	.....	.....	750	14,900	1,800	.....	.....
Decrease	29,700	11,750	5,950	500	150	100	.....	.....	.....	30,700	214,900

TEXAS (Outside Gulf Coast)

PANHANDLE DISTRICT

	July 19	July 12
Carson County	8,900	9,400
Gray County	70,350	71,350
Hutchinson County	21,200	20,900
Wheeler County	900	600
Others	400	400
Total	101,750	102,650

NORTH TEXAS

Archer County	16,200	16,250
Burkburnett	6,300	8,060
Electra	12,500	10,800
Iowa Park-KMA	5,700	5,650
Montague and Cooke Counties	9,700	9,800
Wilbarger	22,300	23,350
Others	1,700	1,750
Total	74,450	75,600

WEST CENTRAL TEXAS

Brown County	6,450	6,450
Callahan County	3,700	3,700
Coleman County	3,600	3,600
Eastland-Desdemona	5,700	5,700
Jack County	2,150	2,150
Palo Pinto County	550	600
Shackelford County	7,100	7,100
Stephens County	5,550	5,600
Throckmorton County	1,000	1,000
Young County	18,900	18,950
Others	1,000	1,000
Total	55,700	55,850

WEST TEXAS

Ector	19,800	21,100
Crane-Upton Counties	40,500	40,800
Crockett County	2,250	2,300
Howard County	29,300	29,200
Jones County	1,300	1,300
Mitchell-Scurry Counties	2,200	2,200
Pecos County	4,000	3,900
Reagan County	19,000	19,000
Winkler County	69,200	68,900
Yates	102,100	104,750
Others	4,300	4,300
Total	293,950	297,750

EAST CENTRAL TEXAS

Boggy Creek	3,400	3,400
Corsicana-Powell	5,800	5,800
Currie	350	350
Mexia	4,450	4,400
Nigger Creek	200	200
Richland	250	250
Wortham	900	900
Van Zandt	24,000	24,150
Total	39,350	39,450

SOUTHWEST TEXAS

Darst Creek	26,500	25,750
Dale	300	250
Laredo District	11,700	11,500
Luling	9,800	9,850
Lytton Springs	850	800
Somerset	1,650	1,500
Salt Flat	20,900	21,150
Others	700	1,450
Total	72,400	72,250
T'tl Tex. (outside Gulf Coast)	637,600	643,550

TEXAS GULF COAST

Barbers Hill	18,850	19,500
Batson	1,200	1,250
Big Creek	4,300	4,050
Blue Ridge	1,650	1,650
Boling	1,100	1,150
Damon Mound	700	700
Esperson	2,500	2,150
Fannett	750	960
Goose Creek	4,700	4,800
Hankamar	2,350	2,450
Hull	8,200	8,200
Humble	18,050	17,700
North Dayton	1,700	2,000
Orchard	2,400	2,450
Orange	2,200	2,100
Pettus	5,050	5,200
Pierce Junction	11,400	11,000
Port Neches	1,850	1,900
Refugio	36,250	33,150
Raccoon Bend	11,850	12,150
Saratoga	1,000	1,000
Somerville	1,500	1,500
Sour Lake	2,200	2,300
South Liberty	3,900	4,300
Spindle Top	18,000	17,450
Sugar Land	12,000	12,100
West Columbia	5,450	5,500
Others	2,400	2,500
Total	183,500	181,100
Texas Total	821,100	824,650

OKLAHOMA

Asher	1,600	1,700
Carr City	7,550	4,950
Logan County	4,000	5,450
Braman	3,350	3,350
Blackwell	3,500	3,500
Hubbard	1,500	1,500
Thomas	650	650
Tonkawa	7,200	7,250
Garber	4,400	4,400
Burbank	16,000	16,150
Osage (outside Burbank)	25,750	25,900
Cushing	13,300	13,300
Yale Jennings	7,950	8,000
Davenport	1,200	1,150
Bristow Slick	15,250	15,300
North Okmulgee	10,800	10,800
South Okmulgee	7,300	7,300
Cromwell	7,500	7,500
Papoose	2,700	2,700
Wewoka	3,600	3,700
Seminole	19,050	23,500
East Seminole	2,800	3,100
Bowlegs	20,150	21,400
Searight	9,650	10,650
Little River	30,350	33,800
East Little River	13,750	12,900
Earlsboro	28,400	29,150
East Earlsboro	19,850	26,850
South Earlsboro	13,000	13,900
Duncan District	9,300	9,300
Graham	3,400	3,450
Fox	1,150	1,200
Healdton	12,100	12,150
Hewitt	7,250	7,250
Scholem-Alechem	15,000	13,900
Pearson	800	700
St. Louis	28,700	30,000
Allen	18,200	19,800
Maud	4,700	4,450
Mission	8,650	9,600
Oklahoma City	74,150	83,500
Sasakwa	7,300	8,500
Konowa	23,850	19,900
West Ashei	3,000	2,350
Others	66,650	70,150
Total	586,300	616,000

CALIFORNIA

Santa Fe Springs	112,000	112,500
Long Beach	100,000	98,000
Huntington Beach	28,000	28,000
Dominguez	10,000	10,300
Inglewood	17,400	17,500
Midway-Sunset	63,500	63,500
Ventura Avenue	50,500	49,800
Seal Beach	21,300	22,000
Elwood1Goleta	46,500	45,000
Kettleman Hills	13,700	14,500
Others	152,000	152,000
Total	614,900	613,100

KANSAS

Greenwood County	19,550	20,300
Florence-Covert	750	800
Peabody-Ebling	2,950	3,000
Eldorado-Towanda	14,000	14,500
Augusta-Fox Bush	2,800	2,900
Rainbow Bend	1,100	1,100
Russell	3,500	3,500
Churchill	3,900	3,950
Oxford	2,800	2,800
Sedgwick	18,200	17,550
Voshell	8,250	17,150
Others	38,500	40,500
Total	116,300	128,050

NORTH LOUISIANA

	July 19	July 12
Homer	3,500	3,500
Haynesville	4,800	4,750
Caddo Light	9,600	9,500
Caddo Heavy	2,200	2,450
DeSoto-Red River	3,100	3,050
Holly	1,450	1,250
Carterville	2,900	3,250
Cotton Valley	2,050	2,000
Urania	5,250	5,250
Zwolle	2,850	2,950
Others	1,700	1,600
Total North Louisiana	39,400	39,550

LOUISIANA GULF COAST

Bayou Boullion	100	150
East Hackberry	2,200	2,400
Hackberry	1,100	1,100
Edgerly	550	550
Evangeline	2,400	2,650
Lake Barre	1,600	600
Lockport	3,450	3,200
Port Barre	3,650	3,100
Sorrento	100	100
Sulphur Dome	3,500	4,000
Sweetlake	100	100
Vinton	4,450	8,000
Others	2,600	2,750
Total Louisiana Gulf Coast	25,800	28,700
Louisiana Total	65,200	68,250

ARKANSAS

El Dorado	4,200	4,200
Champagnolle	4,400	4,400
Smackover Light	5,150	5,150
Smackover Heavy	37,600	37,800
Stephens	950	950
Nevada	1,000	1,000
Lisbon	950	950
Others	1,250	1,150
Total	55,500	55,600

MOUNTAIN STATES

WYOMING

Salt Creek	27,000	23,750
Grass Creek	2,200	1,900
Elk Basin	850	700
Big Buddy	2,050	2,050
Lost Soldier	950	950
Rock River	2,200	2,150
Lance Creek	150	150
Oregon Basin	2,850	2,850
La Barge	2,200	1,450
Others	5,150	5,000
Total	45,700	40,950

MONTANA

Cat Creek	1,150	1,100
Sunburst	5,950	5,950
Pondera	2,300	2,300
Others	50	50
Total	9,450	9,400

COLORADO

Moffats (Craig)	1,150	950
Fort Collins	1,300	1,250
Florence	550	550
Others	1,600	1,600
Total	4,600	4,350

NEW MEXICO

Table Mesa	100	100
Artesia	700	700
Hogback	450	500
Rattlesnake	1,400	1,400
Bal. Lea & Eddy Counties	38,500	28,650
Others	1,050	1,000
Totals	42,200	32,350
Total Mountain States	101,950	87,050

EASTERN STATES

(Including Ill., Ind., Ohio, W. Va., Pa., Ky., N. Y.)		
	129,000	128,000
Michigan	9,850	10,100
Total Eastern States	138,850	138,100

PRODUCTION SUMMARY

East of Rockies	1,783,250	1,779,600
Total U. S.	2,500,100	2,530,800

Hold Drilling to the Vertical

Prove it as you go

The economic results of the crooked hole is immediately felt in increased drilling costs and later in greater production costs. Drillers today are striving to keep the hole straight.

This crooked hole problem has brought about the appearance of a large number of devices for indicating any deviation from the vertical. Most common is the Acid Bottle, dangerous to handle, slow in operation, inaccurate in result and difficult to interpret.

The SYFO CLINOGRAPH provides the remedy. It not only offers you an infallible means of determining the degree of deviation, but the SYFO does it quickly so that daily tests are not a burdensome interruption to drilling. It operates without acids, is accurate, and it provides a permanent record on paper for filing. Durable, easy to understand and operate.

The SYFO is leased, not sold. Write for Catalogue and quotations, stating conditions and number of wells.

A SYFO recording sheet giving complete information which may be filed as a permanent record.

Sectional view of a SYFO CLINOGRAPH. It is either let down on a wire line or can be dropped into the hole by the "Go-Devil" method prior to pulling out the drill stem.

SYFO CLINOGRAPH

SPERRY-SUN WELL SURVEYING CO.

Main Office - 1608 Walnut Street

DALLAS PHILADELPHIA, PA. TULSA

CRUDE OIL PRICE QUOTATIONS

(Revised to July 22, 1930)

CRUDE PRICE CHANGES

Effective July 19, Joseph Seep Purchasing Agency reduced price of Corning crude 25 cents a barrel.

EASTERN STATES

(Effective July 19, 1930)

*Bradford Grade	2.20
Penn Grade Oil in National Transit Lines (Pennsylvania)	2.05
Penn Grade Oil in Southwest Pennsylvania Lines (Penna.)	2.00
Penn Grade Oil in Eureka Pipe Line Lines (West Virginia)	1.90
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	1.75
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia)	1.50
Corning 35-cent Grade Oil in Buckeye Pipe Line Co.'s Lines	1.30
Corning 25-cent Grade Oil in Buckeye Pipe Line Co.'s Lines	1.50
Somerset Oil in Cumberland Pipe Line lines (Kentucky)	1.37
Ragland Grade Oil in Cumberland Pipe Line lines (Kentucky) (Effective Jan. 29, 1929)	.60
Wayne Dist. Oil in Cumberland Pipe Lines	1.24

*Posted by Tidewater Pipe Company.

CENTRAL STATES

(Effective June 26, 1930)

Posted by Ohio Oil Company

Illinois	$1.65
Indiana	1.32
Lima	1.55
Plymouth	1.23
Princeton	1.65
Wooster	1.65

WESTERN KENTUCKY

All grades	1.55

OKLAHOMA-KANSAS

(Effective April 10, 1930)

Below 25 gravity	$ .70
25 to 25.9 gravity	.70
26 to 26.9 gravity	.76
27 to 27.9 gravity	.82
28 to 28.9 gravity	.88
29 to 29.9 gravity	.95
30 to 30.9 gravity	1.02
31 to 31.9 gravity	1.10
32 to 32.9 gravity	1.15
33 to 33.9 gravity	1.185
34 to 34.9 gravity	1.22
35 to 35.9 gravity	1.255
36 to 36.9 gravity	1.29
37 to 37.9 gravity	1.325
38 to 38.9 gravity	1.36
39 to 39.9 gravity	1.395
40 to 40.9 gravity	1.43
41 to 41.9 gravity	1.465
42 to 42.9 gravity	1.50
43 to 43.9 gravity	1.535
44 and above	1.57

PANHANDLE

(Effective April 10, 1930)

GRAY COUNTY

Below 29 gravity	.755
29 to 29.9 gravity	.805
30 to 30.9 gravity	.855
31 to 31.9 gravity	.905
32 to 32.9 gravity	.955
33 to 33.9 gravity	1.005
34 to 34.9 gravity	1.055
35 to 35.9 gravity	1.09
36 to 36.9 gravity	1.125
37 to 37.9 gravity	1.16
38 to 38.9 gravity	1.195
39 to 39.9 gravity	1.23
40 to 40.9 gravity	1.265
41 to 41.9 gravity	1.30
42 to 42.9 gravity	1.335
43 to 43.9 gravity	1.37
44 and above	1.405

CARSON-HUTCHINSON COUNTIES

Below 32 gravity	$ .775
32 to 32.9 gravity	.825
33 to 33.9 gravity	.875
34 to 34.9 gravity	.925
35 to 35.9 gravity	.96
36 to 36.9 gravity	.995
37 to 37.9 gravity	1.03
38 to 38.9 gravity	1.065
39 to 39.9 gravity	1.10
40 to 40.9 gravity	1.135
41 to 41.9 gravity	1.17
42 to 42.9 gravity	1.205
43 to 43.9 gravity	1.24
44 and above	1.275

WHEELER COUNTY

Below 30 gravity	$ .755
30 to 30.9 gravity	.805
31 to 31.9 gravity	.855
32 to 32.9 gravity	.905
33 to 33.9 gravity	.955
34 to 34.9 gravity	1.005
35 to 35.9 gravity	.104
36 to 36.9 gravity	1.075
37 to 37.9 gravity	.111
38 to 38.9 gravity	1.145
39 to 39.9 gravity	.118
40 to 40.9 gravity	1.215
41 to 41.9 gravity	.125
42 to 42.9 gravity	1.285
43 to 43.9 gravity	.132
44 and above	1.355

WEST TEXAS

(Effective April 10, 1930)

Crane-Upton, Crockett, Ector, Howard, Pecos and Winkler Counties and Lea County, N. Mex.

Below 25 gravity	$ .65
25 to 25.9 gravity	.68
26 to 26.9 gravity	.71
27 to 27.9 gravity	.74
28 to 28.9 gravity	.77
29 to 29.9 gravity	.80
30 to 30.9 gravity	.83
31 to 31.9 gravity	.86
32 to 32.9 gravity	.89
33 to 33.9 gravity	.92
34 to 34.9 gravity	.95
35 to 35.9 gravity	.98
36 and above	1.01

Magnolia Petroleum Company posts in Crane, Upton and Winkler Counties. Southern Crude Oil Purchasing Company posts only in Crane, Upton and Winkler Counties.

CALIFORNIA CRUDE OIL PRICES AT THE WELL

(EFFECTIVE JUNE 14, 1930)

Following are the current prices offered by Standard Oil Company for crude oil at the wells; (Price per barrel of 42 gallons in fields indicated)

Gravity	Ventura*	Signal Hill	Alamitos Heights Seal Beach	Huntington Beach	Inglewood	Olinda-Brea Canon	Athens-Rosecrans Dominguez	Elwood Terrace	Torrance	Richfield	Whittier La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall McKittrick Kern River	Midway-Sunset Elk Hills	Buena Vista Hills	Lost Hills	Coalinga	Wheeler Ridge
14-14.9	$ .70	$ .70	$ .70	$ .70	$ .70	$ .70	$ ..	$ ..	$ .70	$ .70	$ .70	$ .70	$ .70	..	$ .55	$ .55	$ .55	$ .55	$ .55	$ .55
15-15.9	.70	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.55	.55	.55	.55	.55	.55
16-16.9	.70	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.55	.55	.55	.55	.55	.55
17-17.9	.70	.70	.70	.70	.70	.70	..	..	.70	.70	.70	.70	.70	..	.55	.55	.55	.55	.55	.55
18-18.9	.75	.76	.76	.76	.76	.76	..	..	.76	.76	.76	.71	.76	..	.55	.62	.62	.62	.62	.62
19-19.9	.80	.82	.82	.82	.82	.82	..	..	.82	.82	.82	.77	.82	..	.55	.70	.70	.70	.70	.70
20-20.9	.85	.88	.88	.88	.88	.88	..	..	.88	.88	.87	.83	.87	..	..	.78	.78	.78	.78	.78
21-21.9	.90	.94	.94	.94	.94	.94	..	..	.94	.94	.93	.90	.93	.92	..	.86	.86	.86	.86	.86
22-22.9	.97	1.00	1.00	1.00	1.00	1.00	..	..	1.00	1.00	.98	.97	.98	.95	..	.94	.94	.94	.94	.94
23-23.9	1.05	1.07	1.07	1.07	1.07	1.07	..	..	1.07	1.07	..	1.05	1.04	1.01	..	1.02	1.02	1.02	1.02	1.02
24-24.9	1.08	1.14	1.14	1.14	1.14	1.14	1.14	..	1.14	1.14	..	1.11	1.10	1.07	..	1.09	1.09	1.09	1.07	1.07
25-25.9	1.13	1.21	1.21	1.21	1.21	1.21	1.19	..	1.21	1.21	..	1.17	1.16	1.13	..	1.16	1.16	1.16	1.12	1.12
26-26.9	1.18	1.28	1.28	1.28	1.28	1.28	1.24	..	1.28	1.28	..	1.23	1.23	1.19	..	1.23	1.23	1.23	1.17	1.17
27-27.9	1.23	1.35	1.35	1.35	1.35	1.35	1.29	..	1.35	1.35	..	1.29	1.30	1.25	..	1.30	1.30	1.30	1.23	1.22
28-28.9	1.28	1.42	1.42	1.42	1.42	1.42	1.34	..	1.42	1.42	..	1.35	1.37	1.31	..	1.35	1.35	1.35	1.27	..
29-29.9	1.33	1.46	1.46	1.46	..	1.46	1.39	..	..	1.46	..	1.38	1.41	1.37	..	1.41	1.41	1.41	1.31	..
30-30.9	1.39	1.50	1.50	1.50	..	1.50	1.45	..	..	1.50	..	1.41	1.45	1.43	..	1.47	1.47	1.47	1.35	..
31-31.9	1.45	1.55	1.55	1.55	..	1.55	1.51	..	..	..	..	..	..	1.49	..	1.53	1.53	1.53	1.39	..
32-32.9	1.51	1.60	1.60	1.60	..	..	1.57	..	..	..	..	..	..	1.55	..	1.59	1.59	1.59	1.43	..
33-33.9	1.58	..	..	..	..	..	1.64	..	..	..	..	..	..	1.60	..	1.65	1.65	1.65	1.47	..
34-34.9	..	..	..	..	..	..	1.71	1.32	..	..	..	..	..	1.65	..	..	..	1.71	1.51	..
35-35.9	..	..	..	..	..	..	1.78	1.39	..	..	..	..	..	1.70	..	..	..	1.77	1.55	..
36-36.9	..	..	..	..	..	..	1.84	1.46	..	..	..	..	..	1.75	..	..	..	..	..	..
37-37.9	..	..	..	..	..	..	1.90	1.53	..	..	..	..	..	1.80	..	..	..	..	..	..
38-38.9	..	..	..	..	..	..	1.96	1.60	..	..	..	..	..	1.85	..	..	..	..	..	..
39-39.9	..	..	..	..	..	..	2.02	1.66	..	..	..	..	..	1.90	..	..	..	..	..	..
40-40.9	..	..	..	..	..	..	2.08	1.72	..											
41-41.9	..	..	..	..	..	..	2.14	1.78	..											
42-42.9	..	..	..	..	..	..	2.20	1.84	..											

KETTLEMAN HILLS—55 degrees Gravity and above $1.65 per barrel. *Union Oil Company.

General Petroleum Posts following prices 11-13.9 Gr. 50c, 14-22.9 55c at Kern Front, Fruitvale, Mt. Poso Creek and Rd. Mountain districts.

(See page 62)

SINCLAIR THREE-GAS SERVICE...

...let this real merchandising service increase your gallonage!

Here's the new way—the progressive way—to sell gasoline! You give a motorist not only a brand that assures quality, but a *type* that fits his engine and his own driving habits. Today—with changing engines and varying driving conditions—*no one kind* of gasoline can satisfy every motorist and serve every purpose!

Sinclair Dealers now offer *three* gasolines that give three different performances!

Sinclair Aircraft Gasoline, the *Ace* of high test gasolines... gives fast starting and zooming acceleration, brilliant action in traffic and sporty performance on the road. Sinclair Aircraft is the Ace of high test gasolines because it is specially manufactured at Sinclair Refineries, meeting the requirements of the Federal Specifications Board for Aviation Gasoline—domestic grade—and gives sustained power. Due to its careful fractionation it is free from dissolved gases which cause gas locks, uneven distribution, galloping and engine balk.

Sinclair H-C Gasoline... stops knocks and keeps them stopped even on long hills... H-C is high compression fuel with a four-year record of superior engine performance—all gasoline—nothing added!

And—if a customer prefers to pay three cents less per gallon—there's Sinclair Regular Gasoline—for economy and mileage—full of eager power. The quality gasoline at a popular price. Let your customers *choose* their gas from these three remarkable gasolines—remember they're *all* gasoline, nothing added! Sinclair Three-Gas Service will increase your gallonage!

SINCLAIR REFINING COMPANY, INC., 45 Nassau Street, New York—*Atlanta, Chicago, Houston, Kansas City*

CRUDE OIL PRICE QUOTATIONS (*Continued from Page 60*)

HOWARD AND GLASSCOCK COUNTY CRUDE

(Effective April 10, 1930)

Below 25 gravity	$ .65
25 to 25.9 gravity	.68
26 to 26.9 gravity	.71
27 to 27.9 gravity	.74
28 to 28.9 gravity	.76
29 to 29.9 gravity	.78
30 to 30.9 gravity	.80
31 to 31.9 gravity	.82
32 to 32.9 gravity	.84
33 to 33.9 gravity	.86
34 to 34.9 gravity	.88
35 to 35.9 gravity	.90
36 and above	.92

MARKHAM

The Texas Company

(Effective April 11, 1930)

All grades	$ .85

CORSICANA HEAVY

All grades	$ .80

SALT FLAT AND DARST CREEK

All grades	$1.15

SOUTH TEXAS

Mirando	$ .85
Luling	.85

NORTH AND CENTRAL TEXAS

(Effective April 10, 1930)

Ranger, North Texas, Mexia, Powell, Richland, Wortham, Currie, Moran, Nocona and Lytton Springs Crude

Below 25 gravity	$ .72
25 to 25.9 gravity	.77
26 to 26.9 gravity	.82
27 to 27.9 gravity	.87
28 to 28.9 gravity	.92
29 to 29.9 gravity	.97
30 to 30.9 gravity	1.02
31 to 31.9 gravity	1.07
32 to 32.9 gravity	1.12
33 to 33.9 gravity	1.17
34 to 34.9 gravity	1.22
35 to 35.9 gravity	1.255
36 to 36.9 gravity	1.29
37 to 37.9 gravity	1.325
38 to 38.9 gravity	1.36
39 to 39.9 gravity	1.395
40 to 40.9 gravity	1.43
41 to 41.9 gravity	1.465
42 to 42.9 gravity	1.50
43 to 43.9 gravity	1.535
44 and above	1.57

GULF COAST

(Effective April 10, 1930)

Grade "A" all companies	$1.15

Grade "B"

Below 25 gravity	$1.00
25 to 25.9 gravity	1.03
26 to 26.9 gravity	1.06
27 to 27.9 gravity	1.09
28 to 28.9 gravity	1.12
29 to 29.9 gravity	1.15
30 to 30.9 gravity	1.18
31 to 31.9 gravity	1.21
32 to 32.9 gravity	1.24
33 to 33.9 gravity	1.27
34 to 34.9 gravity	1.30
35 to 35.9 gravity	1.33
36 to 36.9 gravity	1.36
37 to 37.9 gravity	1.39

CLASSIFICATIONS OF GULF COAST CRUDE

The Texas Company: GRADE A—Beaume gravity not over 26.0 degrees at 60 degrees Fahrenheit; sulphur not over 0.5 per cent; in distilling 500 cc. of the crude that part of the distillate cut between 65 per cent off and 85 per cent off shall have a pour test of zero or lower. GRADE B—All Gulf Coast heavy crudes which do not meet tests for Grade "A" or for Gulf Coast light.

Humble Oil & Refining Company: GRADE A—All crude conforming to the following tests: viscosity not less than 100 seconds Saybolt at 100 degrees Fahrenheit; sulphur not over .4 per cent; Beaume gravity not over 25 at 60 degrees Fahrenheit. Cold tests of distillates having a viscosity of 1000 seconds at 100 degrees Fahrenheit shall not be over 5 degrees Fahrenheit. GRADE B—Embraces all Coastal crude which does not meet the tests for "A" grade crude.

Gulf Pipe Line Company: GRADE A—Beaume gravity not over 24 at 60 degrees Fahrenheit; viscosity not less than 100 seconds universal Saybolt at 100 degrees Fahrenheit; and sulphur not over 0.4 per cent. The yield of 250 viscosity reduced distillate at 100 degrees Fahrenheit not less than 30 per cent, and this 30 per cent not heavier than 20 Beaume, and its pour test not above zero Fahrenheit. The reduced distillate to be secured by reducing the crude with fire and steam until the bottoms have a flash of not less than 540 degrees Fahrenheit, and not more than 560 degrees Fahrenheit open cup, and the entire distillate obtained in this way reduced to a distillate of 250 viscosity. The 10 per cent cut in the original distillate having an average viscosity of 500 seconds at 100 degrees Fahrenheit to have a pour test not higher than 5 degrees Fahrenheit. GRADE B—Embraces crude which does not meet test for "A" grade.

Sun Pipe Line Company: GRADE A—Viscosity not less than 100 seconds at 100 degrees Fahrenheit Saybolt. Sulphur not over .4 per cent. Beaume gravity not over 25 at 60 degrees Fahrenheit. Cold Test: of distillates having viscosity of 1000 seconds at 100 degrees Fahrenheit shall not be over 5 degrees Fahrenheit A. S. T. M. Method. GRADE B—All Coastal crudes which do not meet specifications for Grade A crude.

38 to 38.9 gravity	1.42
39 to 39.9 gravity	1.44
40 to 40.9 gravity	1.46
41 to 41.9 gravity	1.48
42 to 42.9 gravity	1.50
43 to 43.9 gravity	1.52
44 and above	1.54

REFUGIO

(Effective April 10. 1930)

Below 25 gravity (Heavy)	.85

REFUGIO (Light)

Same as Gulf Coast 25 gravity and above.

PETTUS

(Effective April 10. 1930)

All grades	$1.40

BRENHAM

(Effective March 1, 1930)

All grades	.95

STATE CRUDE PRODUCTION TAXES

Oklahoma—Three per cent of gross value, less royalty interest.

Texas—Two per cent of gross value.

Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 per cent of gross market value.

Montana—Two per cent of gross value at well.

Wyoming and New Mexico—production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.

WYOMING-MONTANA

(Effective April 11, 1930)

Wyoming

Byron	$1.33
Ferris	1.60
Elk Basin	1.55
Grass Creek	1.55
Rock Creek	1.35
Lost Soldier	1.05
Lance Creek	1.63
Mule Creek	1.20
Notches	.65
Big Muddy	1.38
Osage	1.65
Hamilton Dome	.85
Pilot Butte	1.75
Torchlight-Greybull	1.65
Lander	.80
Rex Lake	1.10
South Casper Creek-Poison Spider	1.00

SALT CREEK

Midwest Refining Company

29 to 29.9 gravity	$ .90
30 to 30.9 gravity	.96
31 to 31.9 gravity	1.02
32 to 32.9 gravity	1.08
33 to 33.9 gravity	1.11
34 to 34.9 gravity	1.14
35 to 35.9 gravity	1.17
36 to 36.9 gravity	1.20
37 and above	1.23

MONTANA

(Effective Feb. 15, 1930)

Sunburst	$1.65
Cat Creek	1.48
Lake Basin	2.20

NEW MEXICO

(Effective April 11, 1930)

Artesia	1.05
Hog Back	1.43
Maljamar	.95
Jal and Lea	*

(*) West Texas price scale used by The Texas Company and Humble Oil & Refining Co.

CANADA

(Effective June 28, 1930)

Oil Springs	1.95
Petrolia	2.02

LOUISIANA-ARKANSAS

(Effective April 11, 1930)

Homer, Haynesville, Caddo, El Dorado, De-Soto and Crichton and Cotton Valley*	
Below 28 gravity	$ .87
28 to 28.9 gravity	.92
29 to 29.9 gravity	.97
30 to 30.9 gravity	1.02
31 to 31.9 gravity	1.07
32 to 32.9 gravity	1.12
33 to 33.9 gravity	1.17
34 to 34.9 gravity	1.22
35 to 35.9 gravity	1.255
36 to 36.9 gravity	1.29
37 to 37.9 gravity	1.325
38 to 38.9 gravity	1.36
39 to 39.9 gravity	1.395
40 to 40.9 gravity	1.43
41 to 41.9 gravity	1.465
42 to 42.9 gravity	1.50
43 to 43.9 gravity	1.535
44 gravity and above	1.57

*Shreveport-Eldorado's postings stop at above 40 gravity.

The posting on Cotton Valley is same as Caddo. From 36 to 52 and above the regular gravity schedule is followed.

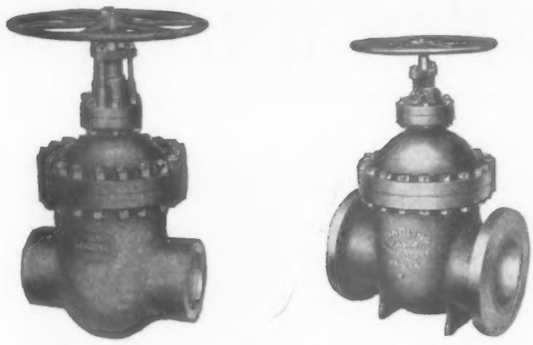
The Texas Company pays North Texas gravity scale in North Louisiana.

STEPHENS

Below 28 gravity	$ .76
28 to 28.9 gravity	.81
29 to 29.9 gravity	.86
30 to 30.9 gravity	.91
31 to 31.9 gravity	.96
32 gravity and above	1.01

SMACKOVER

Below 24 gravity	$ .90
24 and above	1.05



Darling Gate Valves embrace the four essentials for valve usage, i.e.

Tight closing
Long wearing
Easy operation
Ready repair

On well or pipe line—in booster station or refinery, these valves can be counted upon for year in and year out service. Efficient, dependable, yet at a cost but slightly more than ordinary valves.

Darling Valve & Mfg. Co.

Williamsport, Pa.

NEW YORK OKLAHOMA CITY HOUSTON

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Frick-Reid Supply Corp. International Supply Co.
Petroleum Supply Co.

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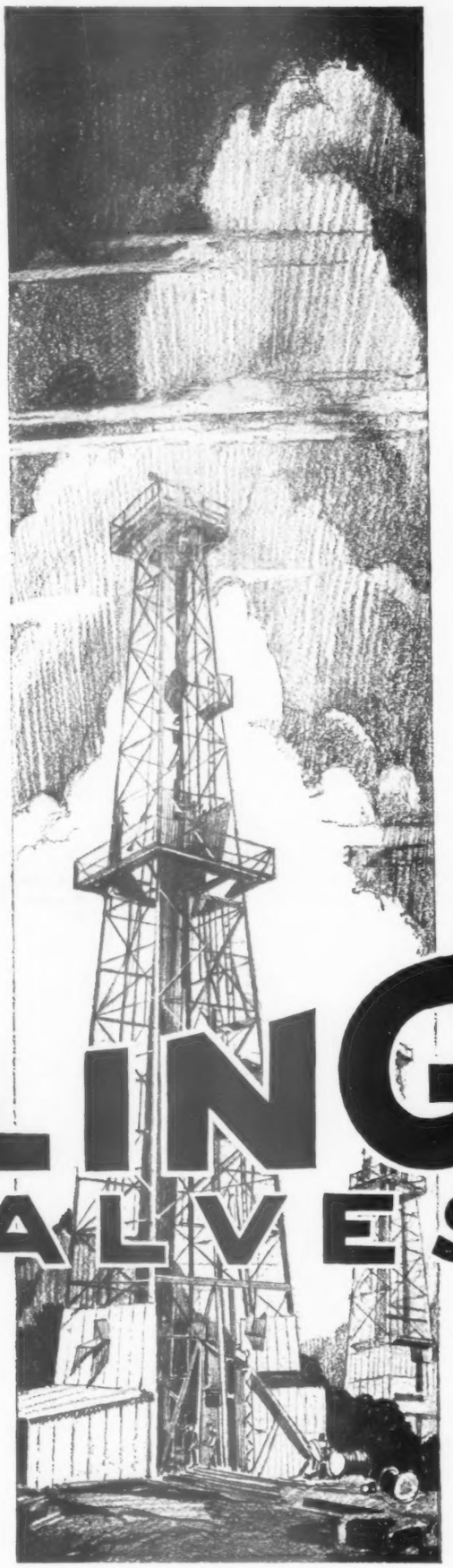

DARLING GATE VALVES

Darling Forged Steel Gate Valve, Dar-a-loy trimmed for drilling, well control, flow lines and other hazardous conditions.

Darval Semi-Steel Flanged End Gate Valve, Dar-a-loy trimmed. Made in all sizes for general field use, pipe lines, drilling through well control and flow lines.

PERSONAL MENTION-MEN YOU KNOW

C. W. MURCHISON
his brother succeeds him.

Clint W. Murchison, who organized Southern Union Gas Company, Dallas, several years ago and has been very active in its expansion programs in Texas, Arkansas and New Mexico, has resigned as chairman of the board, and has been succeeded by his brother, T. Frank Murchison. The latter has been president of the company.

Si Delaney, supervisor of safety for Union Oil Company, is recovering from a broken leg, the result of a previous break which failed to heal properly. The injured leg was re-broken and straightened.

Marshall Simon, an executive of United States Refining Company, was drowned July 12 while trying out a new speed boat near Los Angeles harbor. He fell overboard and drowned before help could be summoned.

Hubert Allen, president of Alco Tool Company, has returned to California after an extended business trip to New York.

Dan Shepard, formerly connected with Pan American Petroleum Company, has been appointed field superintendent for Graham Loftus Oil Corporation at Long Beach.

C. B. Wrightsman, independent operator and owner of acreage in all parts of California, is now located in Tulsa.

R. F. Fisk, Mid-Continent Petroleum Corporation, Tulsa, is chairman of the American Petroleum Institute's recently appointed committee on automotive transportation, production division. D. V. Sloop of the institute's staff, is secretary. Chairman Fisk, in a tentative outline of activities of the committee has suggested three general divisions for investigation and recommendation. These are standardization of equipment and adoption of codes of recommended practice and manuals for drivers, and the care and loading of vehicles; matters related to legislative regulations, and general.

T. L. Lewis, for 18 years with A. M. Byers Company and for the last 12 years as general manager of sales, has resigned to become associated with Norvell-Wilder Supply Company, Beaumont, Texas. Mr. Lewis will make his headquarters at Houston.

Jesse Bullard, Shell Petroleum Corporation, was elected president of Southwest Texas Oil Scouts Association at a meeting held in San Antonio. At the same time other officers elected included J. L. Cullinan, Republic Production Company, vice-president, and M. J. Bonham, Continental Oil Company, secretary-treasurer.

W. R. Thawley, chief scout for Gypsy Oil Company, Tulsa, spent his vacation in Washington, D. C. With Thomas Buell, he drove back to his former home.

G. H. Collingwood, head of the land department office of Independent Oil & Gas Company at Wichita, Kansas, is telling the oil industry of the arrival of a son.

Paul S. Ache, president of Reiter-Foster Oil Company, Tulsa, has been in Denver, where he has directed affairs of the company in the Rocky Mountain area.

O. D. DONNELL
He rescued a bank

O. D. Donnell, president of Ohio Oil Company has been hailed by the people of Cleveland as a public benefactor. Recently when Buckeye Commercial Savings Bank of that city was in difficulties, he placed resources of more than $2,000,000 at the disposal of the institution. He has no official connection with the bank.

—International Newsreel Picture

E. E. WILD
Back with Columbian

E. E. Wild, who resigned as general manager of the Columbian Steel Tank Company a few months ago after having been with the company 12 years, has returned to the same organization as sales promotion manager. Mr. Wild has an intimate knowledge of the steel fabricating business and will have charge of all promotion work in local and foreign markets.

James R. Gahn of Fort Worth, manager of the southern branch of the Tidal Oil Company, which includes operations in Texas, New Mexico, Arkansas and Louisiana, has been elected a vice president of the company.

Paul Kelting, Jr., was born in Houston July 3. Paul, Sr., is territorial manager in Houston for Emsco Derrick & Equipment Company.

W. L. Goldston, geologist for Cranfill-Reynolds Company, Houston, returned last week from a vacation trip to Colorado and Wyoming.

Moses M. Kornfeld, formerly micro paleontologist with Shell Petroleum Corporation at Houston, is now with Atlantic Oil Producing Company of Wichita Falls, Kansas, in the capacity of subsurface geologist.

Dr. W. G. Woolnough, who has charge of petroleum exploration work of the Australian government, is completing a tour of the major fields in West Texas, New Mexico and the upper Mountain States region, with expectations of sailing from California on July 30 for Argentina en route home. Doctor Woolnough is particularly interested in geological conditions of each of the fields in the above states.

Edward L. Doheny, the father of the oil industry in Southern California, is seeking the oldest oil derrick under his management that is still standing, reports Frank R. Seaver, a Doheny executive. Henry Ford hunted for the first car he built but never found it, although he did find one of the initial models. The father of the oil industry in Los Angeles, whose wells were dug in the fifth largest city of the United States, knows that he cannot find his first well because it has disappeared, but he does want to find the oldest of the early ones so that he can preserve it, even as Henry Ford preserved that example of the first model of his automobile.

Old-timers of Los Angeles, whose memories take them back to the early nineties, have been asked to assist in the search and already some of the veterans of the Doheny organization have been at work hunting for that particular derrick that marks, if not

EDWARD L. DOHENEY
Seeks his oldest derrick.

the first, at least one of the first of the primitive wells drilled in Los Angeles.

The first well is gone, states Mr. Seaver, wiped out by the very progress and march of prosperity that it, in itself, started. That first well was near the junction of what today is Glendale and Beverly Boulevards. It was dug by hand, dug with pick and shovel, by E. L. Doheny, to a depth of 145 feet. At this point the gas pressure became so strong that it was impossible for further pick and shovel work.

So a spring pole, such as the Chinese have used for many centuries to dig wells, was added to the equipment. This innovation enabled the diggers to add another 15 feet to the depth. At the startling depth of 160 feet, oil began to flow and the yield was hoisted to the top of the shaft at the positively astounding rate of 12 to 14 barrels a day.

The man who dug 160 feet and got from 12 to 14 barrels a day is still alive to witness wells almost two miles deep with yields running up to thousands of barrels a day, for it must not be forgotten that one of the Doheny wells in Mexico still holds the world's record of something like 264,000 barrels a day.

That initial Doheny well was really a great triumph. For not only did the father of the oil industry in Los Angeles dig his own well, but he also found a market for his product. The firm of J. D. Hooker & Company paid $2.50 a barrel for it and dipped pipes used for culverts and sewers, into the oil for preservative purposes. That market outlet not being sufficient, the Troy Laundry was persuaded to use oil as fuel in heating water for doing the 1893 linen of the city.

It is a far cry, over a stretch of 37 years, from that primitive shallow hole in the rolling hills of Los Angeles to the mile and more deep wells of today, but the digging of the straight, deep 160-foot hole has kept the father of the Southern California oil industry after the basic idea. Oil wells of old were straight but not deep. Came greater depths but straightness and trueness had to be sacrificed to attain greater penetration. But Doheny could not forget those initial holes, their plumbness into the ground. That is why he is today seeking to find the oldest one of those early derricks.

E. G. Allen, general superintendent Texas-New Mexico operations of Shell Petroleum Corporation with headquarters at Dallas, left last week for an extended vacation in California, and will be relieved by Chas. W. Alcorn, assistant general superintendent, during his absence.

G. Moses Knebel has been made chief geologist for Creole Petroleum Corporation of Venezuela. For the past six years Mr. Knebel has been in charge of surface geological work in East Texas for Humble Oil & Refining Company.

T. B. Slick, who went to Johns Hopkins hospital at Baltimore late in June, is reported greatly improved in health.

F. O. PRIOR

F. O. Prior recently was elevated to the presidency of Dixie Oil Company with headquarters in Tulsa, succeeding A. W. Peake, who now is a vice president of the Standard Oil Company (Indiana), of which the Dixie Oil Company is a producing subsidiary.

Proration Hearing Set for July 30 at Austin

Austin, Texas.—The Railroad Commission of Texas, under the direction of Pat M. Neff, chairman; C. V. Terrell, and Lon A. Smith, commissioners, has ordered that a hearing will be held at Austin at 10 a. m. on Wednesday, July 30, for the purpose of considering the application of the joint committee of the Independent Petroleum Association, Mid-Continent Oil and Gas Association, Texas division, and others, to determine the present status of the oil industry in Texas. Producers from all sections of the state as well as members of the joint committee will be in attendance at this meeting.

Following is a draft of the notice issued by the Railroad Commission:

"It is ordered by the Railroad Commission of Texas that notice be and the same is hereby given to all producers, purchasers and transporters of crude oil in the State of Texas, to all owners of royalty interests in crude oil produced in the state and to all parties having any interest whatsoever in the question submitted for hearing, according to this notice, including the public generally, that the Railroad Commission will at 10 a. m. Wednesday, July 30, 1930, at its hearing room in the capitol at Austin, take up and consider the application of a joint committee of the Independent Petroleum Association, the Texas division of the Mid-Continent Oil and Gas Association, and the purchasers of crude oil in the State of Texas requesting a hearing before it to determine the present status of the production and marketing situation of the oil industry in Texas, to locate and correct any inequalities or injustices, existing in the handling and marketing of the production of the various oil fields in the state, and as a result of such determination to issue such order or orders as may be necessary to secure to the oil producers of Texas equitable distribution of the market for crude oil as contemplated in Senate bill No. 25, defining common purchasers of crude petroleum and placing their control under the Railroad Commission of Texas, and requiring that such common purchasers avoid discrimination in their purchases of crude oil or petroleum of similar kind or quality as between producers in any given field or between fields throughout the state and for the further purpose of avoiding waste of the natural resources of crude oil or petroleum in the state, under authority conferred on the commission by the conservation laws, as contained in Title 102, revised statutes of 1925. Pursuant to said hearing the commission will adopt such policy and accordingly enter such order or orders as may be necessary for the purposes for which said hearing is called."

North and West Texas Field Notes

H. H. KING, *Staff Representative, Fort Worth, Texas*

Van Field Drilling Program Halted By Water Shortage

CORSICANA, Texas. — Drilling program within the unitized area of the Van field became abruptly halted early last week by a water shortage that may continue until a heavy rainfall occurs. Water wells are being drilled by Pure Oil Company, operator of the unit, but the maximum water requirements of the field are not expected to be met by these wells. Work was in progress on 11 tests when the water supply failed, and derricks or rigs are standing on 16 additional locations that are slated to be drilled as soon as possible. All drilling is being done by contractors, who have 15 rotary outfits in the field.

Five new locations were outfitted with steel derricks within the past seven-day period, including two on leases that have not heretofore been tested. Location was made in the northwest corner of Pure Oil Company's M. L. McMahon 48-acre lease, and also in the northeast corner of the same company's J. R. Shivers 46-acre tract, located in the northeast part of the field. The latter will lead to the drilling of a total of six nearby locations because of irregular shape of abutting tracts. Six completions reported for the past week were confined to the proven oil area.

These new wells boosted total completions for the field to 82, and all are restricted to an average output of about 25,000 barrels daily. However, crude shipments through pipe line facilities of Pure-Van Pipe Line Company were averaging about 33,500 barrels daily toward the end of last week. This 10-inch carrier delivered the first Van oil into Smiths Bluff terminals, near Beaumont, on the afternoon of July 11, and was operating at the above capacity before a week had elapsed, with only three mainline stations in service. Three more stations are being erected, and when completed will enable the line to handle about 45,000 barrels daily.

A holdout has developed within the ranks of the five companies participating in the original unit plan at Van in regard to the creation of a second unit plan to assure an orderly development program of proven and semi-proven leases lying to the east. All companies have recognized the fact that oil production from leases outside the original unit must be withdrawn on an equal basis, and have agreed to do so. The Texas Company is reported to have deferred entering into a second unit plan with its leases because of desire to develop and operate it, and has stood firm in its demands so far. Claimants to several vacancy strips on the east side of the Van unit have not been asked to join in a second plan, but all other lease owners, with the exception of The Texas Company, have voted to place all development work in the hands of one company.

The Texas Company's Carter 1, located east of the first successful completion to the east of the original Van unit, is drilling below 500 feet, and should be the next completion. The outpost completion was brought in June 26 by Humble Oil & Refining Company's Mrs. E. E. Correll 1, which is now choked to about 100 barrels daily.

Efforts of the Humble Oil & Refining Company to develop production on its J. A. Freeman 1, a direct east offset to the east line of the Van unit, has apparently missed fire, as salt water was encountered in the lower series of Woodbine sand at 3064-72 feet. This test showed for a small oil pumper at 3012-14 feet early last week, and is drilling below 3425 feet in lime, with 3500 feet set for the abandoning depth.

Pure Oil Company's A. Crim 1, which was reported last week as having given the Van unitized area its first dry hole in the Woodbine sand formation, was reaming hole at 3382 feet early this week to make a deep test. This failure is on the west flank of the oil area.

Henderson Wildcat Interesting

Drilling progress on Tom Cranfill and Gene Germany's wildcat test on what is known as the Murchison block in Henderson County, is being followed with more interest than any single wildcat operation in the Central East Texas district. From a geological standpoint the area merits attention when given a deep test, while a new wrinkle has been employed in financing the test that could develop into a troublesome situation in the event a successful oil strike is made.

These two operators acquired lease on the Mrs. C. C. Starr 183-acre tract, Guadalupe Acosta survey, last March, along with a few small leases, and subdivided a portion of the Starr farm to create 32 five-acre leases that have since been sold at about $1500 each. Provisions are made to drill two tests on each of these five-acre tracts should a field materialize, and thereby lies the threat. Conditions rivaling a townlot drilling boom would be surpassed in the event they succeed in their wildcat adventure.

Cranfill & Germany, Inc.'s Starr 1 is located 150 feet out of the northwest corner of subdivision No. 21, thus giving three of these operators and companies that bought lots, on offset. The top of the Midway formation was logged at 977 feet, with a surface elevation of 434 feet, and during the past week the top of the Pecan chalk was encountered at 2544 feet. The test was drilling below 2700 feet at last reports. It is to be drilled to the Woodbine sand, or at least 4500 feet. The owners of the test are using a heavy rotary rig that has been leased from Mike Mitchell, Houston contractor, to drill the hole.

Shell Petroleum Corporation is reported to be offering a portion of its large leasehold on the LaRue block, Henderson County, to reliable companies and operators for immediate development rather than to proceed with its proposed second test. The first try for production on this block encountered salt plug at 4450-4815 feet in June, and has been abandoned. Any operator or company accepting the above lease offer would probably have to bear a large portion of the drilling expense, as it is now rather difficult to sell leases against drilling tests at a reasonable price, unless the location happens to be in one of the few live spots in the district.

Henderson County is about to receive two more deep tests. L. G. Bradstreet & Company has acquired a substantial portion of Red Bank Oil Company's wildcat block of leases, located southwest of Athens, and must spud a test by

July 25. Rotary rig has been installed on the J. J. Shaughnessey 160-acre lease, being 300 feet from the west line and 2876 feet from the north line of the John Isard survey. W. G. Ray Drilling Company, Shreveport, has contract to drill this test. Sunray Oil Company, Tulsa, has erected rotary outfit to drill north of Athens on the R. H. Davis 164-acre farm, E. G. Harris survey being 600 feet south and west of the most northeasterly corner of the farm. Geo. L. Pace, Wichita Falls operator and contractor, has the contract to drill the latter test, and is also starting a deep test of his own on the Mrs. Sarah Anthony 73-acre farm, Jose M. Betram survey, about one mile west of Eustace. V. V. Waite, Dallas geologist, is reported to have worked out the geology on this Eustace block.

Lease and Royalty Trading Active

Brisk trading in leases and royalties has taken place in northeastern Kaufman County and across the line in Southern Hunt County as a result of the starting of a new wildcat test on a well established faulted area. Otto R. Winter, Mesquite, Texas, and Coastline Explorations, Inc. (Alexander and Shaw), of Houston, are drilling a Woodbine sand test, or to 3500 feet, on the John Barrow farm, R. A. Terrell survey, Kaufman County. The test was spudded several weeks ago and shut down for water after landing surface pipe, but resumed July 19. R. H. Dearing & Sons, Dallas, have the contract to drill the hole. Gulf Production Company has been one of the most active lease buyers around the location, while other major companies and independents have acquired protection leases, with close-in tracts averaging between $40 and $50 per acre. Five tests have been drilled in previous years in this immediate area, including three that were fostered by Winter and Alexander. The new test is about 1800 feet northwest of the Barrow 1 of Alexander & Lyles that was abandoned at 3817 feet after showing traces of oil in Woodbine sand.

In Cherokee County, H. J. Cox and associates are credited with having completed negotiations for D. H. Byrd and R. H. Dearing & Sons, both of Dallas, to drill a 4350-foot wildcat test about five miles southwest of Alto. The location will be made on the Farris farm, P. B. Bean survey, and Dearing will do the drilling. Cranfill & Germany, Inc., Dallas, purchased leases on about 1650 acres on the west side of the Bean survey from Cox and associates at $3.50 per acre.

Reduced Crude Purchases Hurts North Texas District

WICHITA FALLS, Texas.—Curbing of crude purchases by leading buyers in the North Texas district is creating a serious economic situation for the owners of the many thousand small pumping wells that barely show a profit under normal market conditions. The proration schedule introduced into the district by Prairie Oil & Gas Company on July 2 as part of its Mid-Continent crude curtailment program is being taken up by local purchasers, and in some cases made more drastic. Continental Pipe Line Company, subsidiary of Continental Oil Company, has announced that beginning August 1 its crude purchases in the district will be cut 50 per cent.

Continental Pipe Line Company is handling about 6200 barrels of oil daily from fields in Wichita, Archer, Jack and Young Counties, and this figure includes about 2100 barrels of oil controlled by Continental Oil Company, leaving 4100 barrels subject to the above proration order. The company has added to its crude stocks consistently in recent months in an effort to serve all connections, and now has about 1,000,000 barrels of oil on hand, with less than 235,000 barrels of available room.

Prairie Oil & Gas Company is prorating its connections in the district an average of about 35 per cent below normal takings in order to reach a maximum daily quota of 7500 barrels that has been assigned as the company's market outlet for such oil. Storing of oil is also tabooed by this company, as the recently enacted pipe line bill in Texas enables the Texas Railroad Commission to regulate storage rates and also the allotment of storage offered for hire by fields.

Panhandle Refining Company adopted Prairie Oil & Gas Company's proration schedule on July 11, but mostly confined the order to leases that adjoin those affected by the latter company's restricted purchase order, thus affording even drainage by wells.

Wholesale abandoning of many thousand wells in the district that pump an average of less than five barrels daily with a large volume of water will be forced upon operators in the district unless market relief is given.

Judkins Production Cut 5000 Barrels August 1

San Angelo, Texas.—Production in the Judkins field, Ector County, will be about 5000 barrels daily through the Texas Railroad Commission's order that the area be prorated beginning August 1, with the output of the field limited to 15,000 barrels daily. Actual production allowance for the field may fall below this maximum level set by the commission, as the quota is to be determined by crude nominations of pipe line companies, which have indicated a demand ranging between 12,000 and 15,000 barrels daily.

This is the fourth area in West Texas to be officially prorated by the commission, and the fifth for the state. Proration of the Judkins field has been under consideration for several months, and is now going into effect at a time when the field has undoubtedly passed its level on drilling and production.

The commission has ordered the field divided up into 40-acre units, and the market outlet for the field will be allotted on basis of average potential production of wells on each unit, with all wells making less than 150 barrels daily exempt from production restrictions. It was originally planned to prorate the field on a basis of acreage allowance and average potential.

A meeting of the proration advisory committee was held in Fort Worth July 18 with W. L. Todd, chairman presiding, and amended their recommendations to the commission in regard to the method of proration an umpire is to be engaged in carrying out the proration orders, with indications that Ray Richmond, umpire for the Yates field, being assigned the extra task.

Gulf Production Company's Hutchings 4 located about one mile southwest of the nearest production in the Gulf-O'Brien field, Ward County, developed a flow of 8,000,000 cubic feet of gas at 2415 to 2455 feet, resulting in the tools becoming lodged in the hole. This test is located slightly more than one half mile east of fee lands of the University of Texas, and should it develop an oil producer in the regular horizon a drilling campaign is apt to be started by lease owners on University lands.

The Gulf-O'Brien field is virtually proven for oil production on more than 10 sections, and all of this proven acreage is owned by Gulf Production Company, except for Sid Richardson and associates' 170-acre lease, with three wells. A new record for deep drilling in the Big Lake field was created during the past week when Big Lake Oil Company's University 3 "C" reached a depth of 8733 feet. Rotary equipment is being used, and the bottom hole formation is shale and broken lime. This well is located to the southwest of the established deep oil and gas area, and has apparently passed through the regular pay. It passed up small oil and gas flow at 8581 feet. It is now the second deepest drilled hole in the world outside of California.

Wax Lake Test

Houston.—Pure Oil Company has abandoned its wildcat, Wax Lake State 2, located in St. Mary Parish, Louisiana, in Section 11-17s-9e, in sticky shale at 5905 feet. No important showings were reported in the test, which was drilled following seismograph work.

Gulf Coast and South Texas Fields

JACK LOGAN, *Staff Representative, Houston, Texas*

Barbers Hill Well Jumps from 300 to 6000 Barrels Daily

HOUSTON. — Sudden and phenomenal increase in production of a deep well on the west flank of the dome and completion of a small pumping well from a new deep sand on the east flank constituted the most interesting developments at Barbers Hill the past week, while continued performance of Humphreys Corporation's deep sand discovery well on the northwest side as a steady, flowing well after yielding over 675,000 barrels of oil is worthy of mention.

The west side well which broke into prominence was Yount-Lee Oil Company's Zadie Fisher 1, which is incidentally the deepest commercial producer on the Texas Gulf Coast, the bottom of the hole being at 6661 feet. It had been pumping at the rate of 300 barrels daily, but on July 18 at seven p. m. it blew in flowing through casing and tubing at the rate of 6000 barrels of oil per day together with four per cent salt water. During the 24 hours of July 20 the well produced 2811 barrels of oil. This producer is the discovery well of deep sand pay on the west side of the field, and various other tests are in progress as result of its successful completion.

The new deep producer on the east flank of the dome is Humphreys Corporation's Kirby H-3, located in the midst of numerous wells that are producing from the regular 5100-5400-foot horizon. It also was completed originally in that horizon last year, some time ago it was decided to drill the hole deeper. Late last week from total depth of 6182 feet it began pumping from 15 to 20 barrels daily, and is still producing at about the same rate. The producing sand is considered by Humphreys Corporation to be in the transition zone between the Oligocene and the Jackson, like the pay sands in the new deep wells of the company on the north flank, Scott 2 and Morgan 1.

Humphreys Corporation's Kirby A-8, prolific well which discovered deep production on the northwest flank, coming in January 4, 1930, was still yielding around 900 to 1000 barrels daily last week. Up to July 1 the total recovery from it had increased to 663,406 barrels, and since then the average daily output has been around 1000 barrels, so that at the beginning of this week the total recovery had mounted to approximately 685,000 barrels. Pressure on the drill pipe, which is still in the hole, and through which the well is flowing, is 175 pounds.

Several Completions Recorded

There were several completions at Barbers Hill the past week. Sinclair Oil & Gas Company's Wilburn 7 came in flowing at the rate of 365 barrels, 15 per cent b.s. and water, daily from 5195 feet, producing through five-eighths-inch choke and registering pressure of 100 pounds. Mills Bennett Production Company's Fisher-Higgins 2 came in flowing 2000 barrels 27 gravity oil daily at 4769 feet. Yount-Lee Oil Company's Chambers County Agricultural Association 14 had initial production of 650 barrels at 4475 feet, flowing through one-half-inch choke and yielding 24 gravity oil. That company's Richardson 5, which is 1800 feet southeast of the same concern's Zadie Fisher 1, went into salt, which was drilled to 5000 feet, plugged back, but was later abandoned.

Humphreys Corporation's Morgan 1, 6404-foot producer on the north flank of the dome, completed late in June, 1930, continues to build up gradually in production. Late last week it was flowing around 325 barrels daily, as compared with its initial production of 200 barrels. Humphreys Corporation's Scott 2, also on the north flank, with the bottom of the hole in oil sand at 7296 feet, will be put on the beam.

In the light of the completion of Humphreys Corporation's Kirby H-3 as a small pumping producer another old well of that company on the east side, drilling deeper now, is of interest. It is on the same lease, being Kirby H-2. Early this week it was drilling hard sand and lime at 6365 feet.

Of the various wells which started drilling following successful completion of Yount-Lee Oil Company's Zadie Fisher 1 on the west side of the dome the most interesting at present is the same company's Zadie Fisher 2, located 250 feet northwest of No. 1. It has set casing at 5705 feet over an oil sand. No. 1 also had a good sand around that depth, but it was decided to make a deeper test. Sun Oil Company's Winfree 1, mid-way between Zadie Fisher 1 and the prolific Humphreys Corporation producer, Kirby A-8, was drilling at 4203 feet late last week. Other deep tests in progress on the west side of the field include Mills Bennett Production Company's Barrow 10, 2400 feet southeast of Zadie Fisher 1, drilling below 4700 feet, and Humble Oil & Refining Company's Myers Fee 6, 300-foot southeast offset to Zadie Fisher 1, with total depth of 5331 feet.

Darst Creek Schedule Remains Unchanged Until August First

HOUSTON.—Although the Railroad Commission of Texas assumed control of proration at Darst Creek on July 15, as scheduled, there was not at that time any revision of the schedule of well potentials and production allowances as previously planned, and during the latter half of July the same schedule which was in effect the preceding two weeks, will be used.

The failure to make out a new schedule was due to lack of time for purchasers to determine their nominations, for re-gauging the numerous wells in the field, and for working out the various details and problems connected with the switching from the voluntary operators' proration program to that supervised by the state. By waiting until August 1 to institute the first schedule of the new regime sufficient time will be afforded.

One of the innovations under the August 1 schedule will be the inclusion of the group of wells in the "Appling area," one mile northeast of the limits of the main field. About one-half dozen wells in that area are producing from crevices in the top of the Austin Chalk along the sub-surface fault. Under the voluntary proration agreement those wells were never restricted.

Although no official announcement has been made to that effect, Gulf Pipe Line Company, which is building an eight-inch line into the field, is expected to be included as one of the purchasers at Darst Creek beginning August 1. The company's 200-mile all-

welded carrier to Sour Lake is reasonably sure to be completed between August 1 and August 15, and by August 1 the company will have completed construction of all four of the 80,000-barrel steel tanks to be used at Darst Creek. One of those tanks was already completed early this week, and the other three were scheduled for completion by the end of the month.

With completion of Gulf Pipe Line Company's system, the total nominations of crude purchasers is expected to be materially increased, thus affording increase in total production allowance in the field, for under the state proration program the field's output is to be restricted to the market outlet as determined by the purchasers' nominations. The proration schedule in effect from July 1 to July 15, under the voluntary program and now still in force under state supervision shows 152 completed wells at Darst Creek, with combined potential yield of 191,063 barrels daily, restricted to allowable production of 20,389 barrels daily. Of the 20,389-barrel outlet representing the allowance, 2332 barrels daily was supplied by Louisiana Oil Refining Corporation, 2080 barrels by Magnolia Petroleum Company, and the remainder of approximately 16,000 barrels daily was divided between the eight-inch carriers of Texas Pipe Line Company and Humble Pipe Line Company.

An increase in the number of wells is due with the initiation of the August 1 schedule, for aside from the crevice wells which are to be included there will be several other new wells in the main field, completed since July 1. For several weeks, however, only half a dozen rigs or less have been active in the field, and the completions have been scarce. An effort to extend the field southward recently failed when Penn Oil Company's test in the Guadalupe River bed, 1½ miles southwest of the present limit of the field, found the Edwards lime dry, topping that formation at 2644 feet, and being abandoned at 2750 feet. Adams & Lyles' Denman 1 in the William Arrington Survey, south of Darst Creek field, was reported late last week in Edwards Lime at 2815 feet after topping it at 2780 feet and after finding the top of the Austin Chalk at 2445 feet.

Plan Two Refineries and Pipe Line Relief for Chapman Field

FORT WORTH, Texas.—Two refineries and additional pipe line relief for operators in the Chapman field, Williamson County, Texas, promise to balance market outlet with available production. Roy A. Westbrook, Fort Worth operator, and associates will begin construction work this week on a 3000-barrel capacity skimming plant to be located at Thrall, Texas. Westbrook is president of the Williamson County Pipe Line Company, which has a four-inch pipe line, extending from the Chapman field to two 55,000-barrel steel tanks and a tank car rack at Thrall. This line is now delivering about 6500 barrels of crude daily on contract to Sinclair Refining Company, Atlantic Refining Company and Central-Texas Refining Company, and has a field posted price of about 55 cents per barrel below Mid-Continent gravity scale prices.

E. L. Chapman, Fort Worth operator and discoverer of the field, is negotiating for the erection of a 5000-barrel capacity skimming plant to be located at Taylor, Texas. G. L. Rowsey, who has been identified with the construction and operation of refineries of Reese S. Allen and associates at Wichita Falls, Amarillo, Pampa and Big Spring, Texas, is dealing with Chapman on the project.

Two new 77,000-barrel steel tanks have been purchased by the Chapman Pipe Line Company from Chicago Bridge & Iron Works for erection at the Thrall tank car rack of the company. The company is also at work on a four-inch pipe line to supplement its two-inch carrier that was built several months ago from the producing leases of E. L. Chapman and associates to a 10-car capacity rack at Thrall. According to Chapman, the four-inch line will be 7½ miles in length, and will be extended over to Taylor, a distance of about 9½ miles, in the event the refinery project is carried out.

Chapman field has about 60 completed oil wells that are credited with a daily output of more than 15,000 barrels. The oil averages 36 to 38 gravity, and is free of sulphur, although it contains a high percentage of paraffine.

Boy Acts Human Fishing Tool to Recover Lost Bit

Rio Grande City, Texas.—Volunteering to act as a human fishing tool, a 12-year old boy, son of John L. Dickson, driller of the test, went down 235 feet into the wildcat oil test, I. V. McClain No. 1, being put down on Tract 5, Porcion 81, Starr County.

The drilling bit had been lost, and when attempts to fish it out failed the young boy put one foot through a loop in the cat line and descended into the well. The well is being drilled with cable tools, and the hole is 16 inches in diameter.

Since the well was not cased, affording danger of a cave-in of the earth, the feat was particularly hazardous, but it was accomplished successfully. Reaching the bottom of the hole the boy hooked a line to the bit, and it was subsequently recovered.

Two Producers and One Failure for Humble

Houston.—Early this week Humble Oil & Refining Company completed three tests in the Gulf Coast in three fields, two producers and one failure. The abandonment was Warren 7 at Hockley. After the derrick had been pulled in the company decided to quit the test, the bottom of the hole being at 7063 feet in shale. In the Raccoon Bend field, Austin County, Bellville School 5 was completed for 185 barrels daily at 3586 feet. At Sugar Land Brazoria Farms 15 came in for 118 barrels initial production at 3748 feet.

Cedar Bayou Test Fails

Houston.—Sloane Prospecting Company has abandoned its Davis 1, second test on the Cedar Bayou prospect, Harris County, five miles northwest of Barbers Hill field. Bottom of the hole was in sandy shale at 6405 feet. This well was located in the north half of the Hannah Nash Survey, 2100 feet northwest of the first test which the company drilled in the area, Ulrich 1. That first well was abandoned in water sand at 6225 feet. It had several oil and gas showings below 4500 feet. Davis 1 is also reported to have had an oil show at 4020 feet. Geophysical work furnished the basis for drilling this prospect.

Brazoria County Prospect

Houston.—Another Brazoria County geophysical prospect is due to be given its first drilling test in the immediate future, Rycade Oil Corporation and Vacuum Oil Company having made location for a wildcat in the Lake Jackson area. It will be their Wisdom 1, located in the J. E. Groce Survey, 4248 feet south and 4143 feet west of the southeast corner of the J. Rumpler 417-acre tract.

Abandon Matagorda Test

Houston.—Watts Oil Company has abandoned its wildcat, Titus 1, south of College Port, southern Matagorda County. The bottom of the hole was in shale at 3500 feet. The test, located in the Wheelwright Survey, was put down following work with both torsion balance and seismograph. Aside from a gas sand found around 450 feet, no important showings were reported in the well.

Danbury Dome Test

Houston.—Shell Petroleum Corporation has abandoned Blakely-Winston 3 on the Danbury dome, Brazoria County, in sandy shale at 1745 feet. This well was 100 feet west and 300 feet north of No. 1, which produced a little oil, although not in commercial quantity, at 1667 feet, and which was subsequently drilled into salt at 5225 feet. The next test in the field, it is reported, will be nearer to No. 1 than the well that has just been abandoned.

Two New Producers Completed at Pettus; Two Near Completion

HOUSTON.—Two additional producers have been completed at Pettus, Bee County, in the pool opened by Cosden Oil Company, while two others were in process of completion early this week. These wells in the Cosden area and two wildcat abandonments in the vicinity constituted the more important developments of the Pettus district the past week.

The newer of the two recent completions in the Cosden pool was Batex Production Company's Barnett Heirs 1, which came in flowing at the rate of 120 barrels of oil and 20 million feet of gas daily through a three-eighths-inch choke. Bottom of the hole is at 3645 feet, with the top of the sand at 3631 feet. Completion involved setting of 6⅝-inch casing at 3629 feet, and running of 20 feet of screen. This well is a south offset to Cosden Oil Company's McKinney 1, discovery well of the pool, producing 46 gravity oil from 3655-77 feet.

Barnsdall Oil Corporation's Leroy Roberts 1, southeast diagonal offset to the Cosden producer, is the other new producer of the area. It came in flowing 343 barrels daily (actual gauge of first 24 hours' production) through one-half-inch choke following setting of 20 feet of screen to take in sand logged at 3643-55 feet. The well is producing through tubing, yielding 46.5 corrected gravity oil.

Cosden Oil Company early this week drilled the cement plug in McKinney 2, a 500-foot north offset to No. 1, and from 3678 to 3680 feet cored oil sand, following which oil began slopping over the casing. Six and five-eighths-inch casing was cemented in the well at 3629 feet. The same company's McKinney 3, which is a 500-foot west offset to No. 1, was still waiting for cement to set around 6⅝-inch casing, which was landed at 3651 feet following the making of a drill stem test at 3651-55 feet showing two feet of oil in nine minutes. Houston Oil Company's M. A. Neumann 1, east offset to Cosden Oil Company's McKinney 1, was also near completion on July 22. The plug had been drilled, and then the crew cored six feet to total depth of 3684 feet in sand showing oil, after which preparations were made to set screen.

A wildcat abandonment made in the Pettus district early this week was William F. Morgan et al's W. W. Boyce 1, located three miles north of the original Pettus oil pool, and just north of Morgan et al's gas well, McKinney 1. Boyce 1 is across the county line in the Habermacher Survey, Karnes County. It was abandoned in shale at 5280 feet. McKinney 1 came in with estimated production of 20 to 30 million feet of wet gas daily at 3680-92 feet, showing rock pressure of 1400 pounds.

The other abandonment of the district was William F. Morgan and Tidal Oil Company's Pereira 1, located eight miles east of Pettus oil production, across the county line in Block 14, V. Ramos Survey, Goliad County. The test was abandoned at 6004 feet. With the exception of E. M. Jones' William Rapp 1, one mile southwest of Tuleta, Bee County, drilled to 6062 feet, then plugged back, and Union Producing Company's Ray 3 in western Goliad County, near the county line, which went to 6005 feet, this test on the Pereira tract is the deepest well ever drilled in the Pettus district.

Air view showing town-lot development at Pettus

Production

Average production in the Pettus district during the week ending July 18 amounted to 5261 barrels daily from 13 wells, as follows:

Company and wells—	Daily Prod.
Barnsdall Oil Corporation, Roberts 1 (one day)	343
Cosden Oil Company, McKinney 1	261
Grayburg Oil Company, Kimball 1, working over	...
Humble Oil & Refining Company, McKinney 1-2-3-4	1943
Nichols Oil Corporation, Hicks 3, working over	...
Union Producing Company, Ray 5-7-8-9-14	2177
Houston Oil Company, Beasley 1, Block 36	522
Glasscock Brothers, Hodges 1, Block 41 (62 gravity)	15
Total (13 wells)	5261

Production from the well of Glasscock Brothers is gasoline (oil testing 62 gravity), and the owners have set up a filling station at Pettus, it is reported, and have become retailers, marketing their own production at 15 cents per gallon, whereas the posted price for pettus crude is $1.40 per barrel, that from all wells but those of the Glasscock Brothers testing around 45 gravity. Automobiles are said to operate satisfactorily using the unrefined product. The gasoline well came in as a high-pressure wet gas well, and it later began yielding the high gravity fluid.

In the Pettus townsite S. R. C. Company's No. 1, Block 37 is setting casing after encountering oil sand at 3987 feet and penetrating it to 3903 feet. Its location is one block north of Houston Oil Company's Beasley 1, Block 36, which was the first completed producer in the townsite. Houston Oil Company is rigging up on Block 35, has derricks up on Blocks 23 and 33, and has location made for Block 21. Glasscock Brothers have spudded on Block 24, and Al Buchanan et al's Block 38, No. 1, is drilling shale at 3109 feet after finding the top of the Jackson at 2855 feet. Getty Oil Company's Town 1, Block 40, is rigging up. Rio Bravo Oil Company's S. A. & A. P. Railroad 7 on the right of way just north of the station at Pettus is drilling shale at 3360 feet. That location is only about 500 feet east of Trinity Drillers' Roberts 1, which tested salt water at 3930 feet. Humble Oil & Refining Company's McKinney 5, south offset to Houston Oil Company's Beasley 1, has cemented 10-inch casing at 600 feet. Union Producing Company's Ray 15, east offset to the Houston Oil Company producer, was drilling late last week at 3806 feet in shale, and its Ray 16, direct east offset to Glasscock Brothers' well in Block 41, was drilling at the same time at 2941 feet in shale.

Six Tests West of Pettus

The pool seven miles west of Pettus opened by Grayburg Oil Company's Kimball 1, has six tests under way. Arkansas Natural Gas Company's A. J. Kimball 1 is rigging up. Grayburg Oil Company's Copeland 1 is drilling shale at 615 feet, and that company's Kimball 1 is drilling shale at 801 feet. Hicks & Young's Billingsley 1 is shut down after spudding. Lange & Mimms' Billingsley 1 has cemented 10-inch casing at 375 feet.

A wildcat test which will be of wide interest is Simms Oil Company's Holzmark 1 in the J. A. York Survey, Bee County. It is 5½ miles southwest of the Nichols producer on the Hicks land near Normanna, and 7½ miles south of the Grayburg Oil Company pool. The test was reported last week to be rigging up. It is 3½ miles northeast of Trinity Drillers and T. B. Slick's Alfred Theis 1, the latter being one mile northeast of Cadiz. It also is rigging up.

George A. Henshaw et al's Beck 1, northeast of Normanna, is drilling shale at 3985 feet. It found the top of the Jackson at 2900 feet. Nichols Oil Corporation's Hicks 4 is testing a sand at 3641-46 feet. E. S. Price et al's Laura Weiss 1, located 3½ miles southeast of the original Pettus pool, is shut down in shale at 4264 feet. Southern Crude Oil Purchasing Company's M. Dahl 1, which is in the George Pagan Survey, Bee County, two miles northwest of the Cosden pool is drilling shale at 3290 feet after encountering the top of the Jackson at 2550 feet. Dr. W. E. Hewitt et al's Ray 1 has been plugged back to 4089 feet for a test, having encountered salt water on a test at 4086-4103 feet. That well is in the extreme western part of Goliad County in the B. & B. Survey 27, being three-quarters of a mile north of Union Producing Company's Ray 3, a gas well. Union Producing Company's Ray 12 in the W. D. Sutherland Survey, Goliad County, approximately six miles northeast of the original Pettus oil pool and two miles southwest of Zoch et al's Goliad County gas well, is drilling gumbo at 2822 feet.

Two Important Safety Meetings To be Held July 30 in Houston

HOUSTON.—Two important safety meetings are scheduled to be held in Houston Wednesday, July 30, under sponsorship of the safety division of the Mid-Continent Oil & Gas Association and the petroleum section of the National Safety Council. The latter organization functions through cooperation with the American Petroleum Institute.

The main meeting of the day, to be held at 7:30 p. m. at the Rice Hotel, will be attended by petroleum supervisors in all departments of all companies operating in the Texas and Louisiana Gulf Coast, and from 200 to 300 men are expected to attend.

The other meeting, which will be held in the club rooms of the Humble Oil & Refining Company building at 2 p. m., will be attended by petroleum safety engineers of the Gulf Coast district.

At the general meeting at the Rice Hotel, Jack Dies of the land department of Humble Oil & Refining Company will act as chairman, and the program will include the following: (1) Invocation by Dr. T. J. Windham; (2) "Accident Prevention is Good Business," talk by H. N. Blakeslee, petroleum representative of the National Safety Council, Chicago; (3) "Getting Results," talk by C. L. Hightower, safety director, Texas Pacific Coal & Oil Company, Thurber, Texas; and (4) "Responsibilities in Foremanship," by D. J. Wallace, safety director, Mid-Continent Oil & Gas Association, Tulsa.

The purpose of the meeting of safety engineers in the Humble building Wednesday afternoon will be to form a South Texas branch of the Petroleum Safety Council. Chapters of that organization are now functioning in Tulsa, Fort Worth, and Shreveport, Louisiana.

Fifty safety engineers are expected to attend the engineers' meeting, according to local committee of arrangements, which is in charge of the programs at the Humble building and at the Rice Hotel. That committee is composed of V. H. Hayslip, safety inspector, Humble Oil & Refining Company, C. L. Housh, safety director, Sinclair Refining Company, P. E. Keegan, safety director, Shell Refining Company, and J. J. Delahide, district manager, E. D. Bullard Company.

Prominent safety engineers who will aid in the formation of the South Texas branch of the Petroleum Safety Council include H. N. Blakeslee, C. L. Hightower, and D. J. Wallace, mentioned above, R. B. Rooper, chief safety inspector, Humble Oil & Refining Company, Houston, T. J. O'Sullivan, Mid-Continent Oil & Gas Association, Shreveport, Louisiana, and C. W. Coleman, Gulf Refining Company, Port Arthur, Texas.

Landreth Sells Half Of Hobbs Holdings To Texas Unity

Fort Worth, Texas. — An undivided half interest in leases and royalty holdings of the Landreth Production Corporation in the Hobbs field, New Mexico, have been acquired by the Texas Unity Oil Company, an affiliation of the Warner-Quinlan Company, New York City, effective July 11 for a consideration of $1,250,000. The purchase price includes $500,000 cash, and the remainder payable out of one-half of the first oil and gas produced from the properties. Landreth Production Corporation retains operating control, according to Ed. A. Landreth, president. Texas Unity Oil Company was also negotiating for the purchase of one-half interest in producing properties held by Landreth Production Corporation in the Taylor-Link and Judkins fields, Texas, involving about 3800 barrels daily production, but excluded the latter from the deal for the time being.

Thirty separate tracts of leases, aggregating 2415 acres, in and near the Hobbs field are involved in the above deal, with three drilling tests on two of the tracts. Landreth Production Corporation only held a part interest in some of these leases, but in each case Texas Unity Oil Company obtains one-half interest in that portion owned by the former. The royalty interests involves a total of 17 pieces, aggregating 822 acres net. Each company reserves the right to market its share of the oil produced. It is quite probable that Texas Unity Oil Company may later market its share of the oil in supplying the Warners, New Jersey, plant of Warner-Quinlan Company, as this refinery operates from time to time on West Texas crudes.

Oklahoma--Kansas Field Notes

FLOYD L. SWINDELL, *Staff Representative, Tulsa, Oklahoma*

Oklahoma City Shut-Down Agreement Extended 12 Days

OKLAHOMA CITY.—The shut-down agreement in the Oklahoma City pool ended at 7 a. m. July 20 and was extended another 12-day period. Actual shut-down was made effective July 11, but in order to keep the 12-day cycle straight the period, so far as time is concerned, was made retroactive to July 8. Production from under-produced wells and that from new completions has brought the daily output to a point which closely approaches the daily pipe line runs; and the storage situation has been relieved but little. However, at the end of the present period most of the wells will have made up their allowable production and unless a number of exceptionally large wells are completed, the shut-down agreement should begin to show some measure of success.

Daily Production for the Week Ending July 19

	No. of Wells	Bbls. Oil	Bbls. Water
July 13	44	58,058	11,655
July 14	45	79,694	12,222
July 15	38	29,566	14,498
July 16	37	56,229	11,880
July 17	45	96,271	17,135
July 18	45	113,358	18,628
July 19	38	82,648	16,932
Totals		515,824	102,950

In the north end, Slick and Atkinson completed their Baker 4, NW NE SW NW, 1-11n-3w, extending production one-quarter mile to the northwest along the eastern side of the field. This well had the sand at 6385 to 6490 feet and flowed 913 barrels the first hour.

Supply Dealers Row at Oklahoma City—where the advantages of city location and being next to the derricks are both enjoyed. The picture is with courtesy of Reed Roller Bit Company

In the same sector Wirt Franklin Petroleum Corporation's Minnie Page 1, SE SE SE, Section 35-12n-3w, topped the Stamper at 6410 and the Arbuckle lime at 6430 feet with a show of water between that point and the bottom of the hole at 6450 feet. The hole was plugged back to 6390 feet and a string of 6⅝-inch casing set at 6077 feet. Finding of water in the siliceous lime does not indicate failure for this test.

Indian Territory Illuminating Oil Company's and Cromwell-Franklin's Trosper Park 9, S½ NE SE NW, Section 12-13n-3w had water in the Arbuckle at 6435 feet and when plugged back to 6360 feet was completed for an initial flow of 11,171 barrels in 24 hours. However, it should be pointed out that wells in the extreme northwest end are not encountering as great a thickness of sand as those to the southwest and southeast, and the Franklin-Page well may have a bearing on determination of productive limit in that direction.

The most important completion of the week for the south end was Sinclair Oil and Gas Company and Independent Oil and Gas Company's School Land No. 69, well 1, NE NE SW, Section 36-11n-3w, which had the sand at 6499 to 6676 feet and flowed 12,570 barrels the first 12 hours. This well is approximately one-half mile north and west of the former company's School Land No. 67, well 4, NE SE SE, Section 36-11n-3w, which had the top of the Wilcox at 6575 feet and water near the bottom at approximately 6800 feet with no oil showing at that depth. Showing of this test and its north offset indicated that wells drilled below minus 5425 feet would very likely encounter water in this part of the field.

Tulsa.—Payne Drilling Company has completed Bullock 3 in the Asher-Wannette pool SE NE 22-6-3, for 4000 barrels. Sand was topped at 3536 feet, and total depth was 3570 feet.

Oklahoma Limit 550,000 Barrels Made Official

Tulsa. — Curtailment of oil production in Oklahoma to 550,000 barrels daily became an official order July 22, when the Corporation Commission approved the petition. The order was made retroactive as of July 15 and extends until September 1. It is in line with the decision of oil producers, who met in Tulsa last week.

But the figures set by the order have not been met in actual production, which shows that Oklahoma is now producing around 585,000 barrels daily. This figure, however, shows a drop of 30,000 barrels daily under last week. Pipe Line concerns are busy in their efforts to remove all classes of restriction from the settled oil fields of the state.

While these are left to produce their full amount under the commission order, some pipe line concerns have been forced to impose curtailment on old leases. When the output for the state is finally down to 550,000 barrels, it is believed the older fields will be removed from curtailment. This will have to be brought about by the swapping on connections. Such trades will be of temporary nature.

Oklahoma City for the past week produced but 73,600 barrels daily but this was under the scheme whereby underproduced wells are being allowed to come up to schedule. This field is allowed 86,000 barrels daily under the commission order.

New Producers Added At West Chandler

Tulsa.—In the West Chandler field of Lincoln County the Coline Oil Company's Telford 1 was added as a producer last week. It is located in the NWc SE Section 7-14-4e. The Simpson sand found at 5031 feet and drilled to 5041 feet is credited with the production. The well flowed at the rate of 300 barrels an hour. The pool, however, is under proration and now has potential output of 25,000 barrels daily.

Prairie Oil & Gas Company's Norton 2, SWc NE Section 7-14-4e, flowed 30 barrels an hour after drilling out a plug, which had been cemented at 4985 feet.

In the West Asher pool Gypsy Oil Company encountered water along with oil in its Archer 1, NW SW SW Section 23-6-3. The hole was drilled to 3555 feet and stopped in shale. The well swabbed 35 barrels of oil with half a bailer of water each hour.

Two Eastboro Wells Have Spotlight in Kansas

WICHITA, Kans.—Two wells in the Eastboro pool, which adjoins Wichita on the east, have kept that development in the spotlight.

Vickers & Hinkle's Keys 1, NEc NE Section 30-27-2e, has a showing of oil from a formation which has been classified as the Wilcox sand. This sand was found at 3238 feet and drilled to 3242 feet. Last week this well was looked upon as defining an edge to the field, as water was encountered in the chat formation. Two previous wells had produced from the chat. Later the hole was carried down to its present level for the purpose of testing the Wilcox.

The other Eastboro well is the chat well, Derby Oil Company's Eastboro 1, SEc SE SW NE 19-27-2e. It drilled into the chat at 2949 feet and is now at 2959 feet, where it is swabbing 70 barrels of 44.6 gravity oil.

In McPherson County, Slick, Pryor & Lockhard's Gratton 2, SWc 43-20-3w, has 50 feet of oil in the hole and is to be swabbed. A showing was found first in the Viola lime at 3393 feet. The Wilcox was found at 3447 feet, where the test will be made by swab.

Proration measures are being felt in many Kansas fields. The Schurr pool in Rice County may shortly be without any outlet for crude, as Independent Oil & Gas Company, the only buyer, is seeking to get free of purchases. The five wells in the field, with potential output of 7500 barrels, has been held back to 50 barrels per well per day; and Independent Oil & Gas Company has been taking this. The oil has been going to storage.

Several drilling wells at Schurr are to be shut down before entering the sand until some other outlet can be provided.

Further reductions in runs from the Voshell pool of McPherson County have brought the output of that pool down to 8000 barrels daily. Its potential output was placed at 48,000 barrels. The output of the field recently was set at 10,500 barrels but further curtailment in pipe line purchases have brought the further reduction.

In the Hugudon gas area of Morton and Stevens Counties, 29 gas wells have been completed. There are 27 drilling wells in the area with 25 rigs and locations.

The drilling program in Kansas now shows 184 active drilling wells, with 92 rigs and locations, and 56 tests spudded and shut down.

Wichita, Kansas. — Half mile north extension of Voshell pool, McPherson County, through completion of Slick, Pryor and Lockhart's Stucky 2, SW NW, 34-20-3w, is good for 600 barrels in Wilcox sand at 3443 feet.

Tatums Area Most Active In Southern Oklahoma

Tulsa.—Sinclair Oil & Gas Company's Howell 1, CSW SW, Section 14-2on-24w, Harper County, about three miles south of Stockholm, shot the 6⅝-inch casing at 5340 feet and had 7,000,000 cubic feet of gas believed to be coming from a sand at 5330 to 5340 feet. This well was drilled to 8583 feet and was Oklahoma's deepest wildcat test.

The Tatums area of Carter County has come to be the most active spot in southern Oklahoma, where some 20 tests have been started, following completion of Trevelyn Oil Company's extension well, Mitchell 1, SW NW SE of 24-1s-3w. The well is still flowing about 2000 barrels daily from sands between 2287 and 2447 feet.

Magnolia Petroleum Company has the greater number of these tests.

A gas well, which extended production in the Cement field to the west, was completed last week by Magnolia Petroleum Company's Sames 3, SE NE NE, 35-6n-10w. The gas was encountered at 3306 feet and the hole drilled to 3420 feet. A gauge showed 50,000,000 cubic feet.

Mid-Kansas Oil & Gas Company's Wade 9, SW SE SW, 2-5n-9w, bridged after a shot and will have to be cleaned again. Oil is coming from sand at 5067 to 4078 feet. It has swabbed 250 barrels in a day but efforts to make a flowing well have met with defeat so far. This deep test is the outstanding work at Cement now.

North Texas Gasoline Market Weak

Refiners at interior points in Texas have not been able to maintain their gasoline price level even though shipments of this commodity are moving at a favorable rate. Shading of prices lately has lowered the average price on United States Motor gasoline to 5½ to 5¾ cents per gallon for tank car lots, and there is no assurance that the bottom has been reached even though such low prices put the plant owner on a non-profitable basis.

Gasoline is failing to carry its proportionate share of the cost of crude and refinery operations, while other refined commodities are even worse off. Kerosene of good quality is difficult to market at three cents per gallon, while fuel oil is reflecting its off season period with a price range of 40 to 50 cents per barrel in North Texas and 30 to 45 cents per barrel in West Texas.

Few if any plants in the interior of Texas are now making a profit from current operations, while a number are known to be taking a financial loss on every barrel of crude put through the stills.

Plan Storing Turner Valley Gas In Exhausted Bow Island Sand

CASPER.—A plan is being projected for the storing of natural gas from the Turner Valley field by recharging exhausted sands of the Bow Island field from the surplus and waste gas of Turner Valley, according to an order-in-council, details of which appeared recently in the Canadian Gazette. The report reveals that a reservation has been granted for a period of 20 years on certain depleted gas sands, and that the plan has been approved by the Minister of the Interior, the gas conservation committee, and the Premier of Alberta.

Among conditions set out in the Order-in-Council, under which the reservation has been granted, is the requirement that the company shall commence the actual injection of gas into the depleted sands not later than May 1, 1931, and the amount of gas to be injected each year shall be not less than 200,000,000 cubic feet until the maximum pressure has been reached and maintained.

Bow Island gas field, in which this interesting gas storage experiment is to be made, is located about 140 miles southeast of the Turner Valley field, and at a slightly greater distance from Calgary.

The Bow Island field that has been found productive has produced a very large volume of gas from a sand, near the base of the Benton Shales, having a thickness of 35 feet.

In 1911 the Canadian Western Natural Gas, Light, Heat and Power Company, Ltd., acquired a well that had been drilled by the Canadian Pacific Railway Company and, in all, some 29 wells have been drilled to date. The gas was supplied to Calgary and other towns through a 16-inch pipe line, 170 miles in length and with a capacity of 39,000,000 cubic feet per day.

Of recent years the sand has become considerably depleted and flooded, in parts, with water, but at the present time it does not have to be drawn upon, for its place as the main source of supply has been taken first by the Foremost field some 20 miles to the south, an area very similar to it geologically, and more recently by the Turner Valley field, where, as is well known, a large volume of gas is produced.

The injection of gas from other sands into a depleted horizon is no new practice but this is the first case where it has been attempted in Canada. The object here is to store surplus gas from Turner Valley that would otherwise be wasted and thus, it is hoped, build up a reserve for the future, which can be easily drawn upon through the existing pipe line as required.

Two summers ago experiments were made on a smaller scale, using gas derived from the Foremost field. It was found that higher pressure than was then available was needed to force the gas into the sand and the necessary plant is now being installed to furnish this. If successful, this plant can eventually handle up to 50,000,000 cubic feet per day. It is generally found that higher pressures are required where water has encroached than is the case with similarly situated but dry sands.

Most of the wells, having been drilled many years ago, are not in the best condition to withstand very high pressure. Some of the wells will have to be abandoned and carefully plugged; others drastically repaired; and the remaining ones used for the actual injection of the gas. The project presents one difficulty that has to be overcome, in regard to which no existing experience has been gleaned elsewhere. That is the overcoming of the flooded condition of the field. Both the Dominion and Provincial Governments are affording the scheme every encouragement.

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Lone Star Reconditions 40 Miles of 12-Inch Line

Dallas, Texas.—Re-condition work is in progress on 40 miles of 12-inch coupled line of the Lone Star Gas Company's original Texas-Oklahoma trunk line system. This section of pipe, extending from Petrolia station, Texas, to Keyes Corners, Stephens County, Oklahoma, has been in continuous service for about 12 years. Luther Tolbert, assistant superintendent of pipe lines for the company, with headquarters at Dallas, is personally supervising the workover job, which is scheduled to be completed early in August.

Ditching machines are used in stripping the pipe of soil. The pipe is hoisted to the surface by means of booms on tractors. Bolts on the couplings are cut in order that the serviceable rings and followers may be salvaged. The company is using a W-K-M traveling type of pipe cleaning machine. Defective joints of pipe are being replaced with new pipe. The re-conditioned pipe is being welded with acetylene gas. A portion of the line is being insulated with a coating of primer paint and enamel, while the remainder is being given a single application of cold dope.

Houston.—Shell Petroleum Corporation is expected to junk its Herff 1, Chambers County wildcat located 1¼ miles southwest of production at Moss Bluff dome, as the derrick was pulled in early this week in an effort to dislodge stuck drill pipe. The hole was drilled originally to 5630 feet, but an effort was then made to sidetrack.

News From California Fields

BRAD MILLS, *Staff Representative, Los Angeles, California*

Playa del Rey Second to Long Beach in Number of Projects

LOS ANGELES.—Activity at Playa del Rey continues to increase, with 30 drilling wells and fully as many active locations placing the field next to Long Beach in the number of field projects. Starting with a few locations, the development program has gained momentum rapidly and the completion of a few good wells would result in a drilling campaign of major proportions. Recognition of the field by some of the major companies, and the large number of smaller operators along the narrow beach strip have been contributing factors to the increase in field work.

Still regarded by some geologists as a doubtful structure, activity is not confined to the townlot sector. The larger leases are being drilled where offsets are not absolutely necessary, this practice to determine the probable trend and extent of production. Extension of the field to the east has been an important development and lends weight to the theory that the structure will be a flat, low-pressure anticline with gentle dips. This belief is held because the field is on a line with the Torrance field to the southeast, the latter being a rather flat, broad-nosed structure. Several operators are prejudiced against the field because Torrance made a poor showing where edge leases were involved.

Discovery of the deep zone at 5580 feet in Superior Oil Company's Moses 1, located a short distance northwest of Union Oil Company's Del Rey 1, established the test as higher on structure than those drilling near the discovery well, but the presence of schist at 5611 feet was an unfavorable development. For a test so high on structure, such a thin oil zone is a disappointment. The absence of a shallow zone is also regarded as an unfavorable indication. A string of 8⅝-inch casing was cemented at 5530 feet for a test of the deep zone. The thinning out of the oil sand toward the top of the structure may lead to completion of the best wells near the flank, although only additional drilling will disclose the true production trend.

Several wells have found the deep sand at various points between 6000 and 6200 feet and will be tested below the final shut-off within two weeks. Barnsdall Oil Company's Burks 1 is standing cemented at 6072 feet, the well to be tested through 2½-inch tubing after the oil sand is opened up below the final shutoff.

Ohio Oil Company is preparing to test Del Rey 2, which extended the oil zone nearly a mile east of the discovery well, 8⅝-inch casing having been cemented at 6475 feet. The well was drilled to 6678 feet and stands a good chance of extending the field. While generally referred to as an extension well, the test can not be yet regarded as a full-fledged producer. The discovery is important and fills a large gap to the west.

Union Oil Company is laying an eight-inch line from the field to connect with harbor refineries, while Ohio Oil Company also has an outlet for its oil. Completion of the former will help to establish a regular posted price for Playa del Rey crude.

Santa Fe Springs Activity Shows Further Decline

LOS ANGELES. — A further decline in field activities at Santa Fe Springs sent the number of drilling wells down to 30 and left the field open for a still greater drop. Reworking of wells may maintain the present level, however, this type of activity already accounting for fully half of the field work. The larger operators are confining their efforts to completion of the few remaining drilling wells and plugging back and deepening of producers which have not been profitable for various reasons. Four completions were recorded during the week, as compared with a single new well during the previous week. The latter period was the first to yield only one completion since the fall of 1928. No effort is being made to develop the 9000-foot zone, the failures early in the year to secure a water shut-off having discouraged deeper development.

Both of the outstanding completions of the week were finished in the Nordstrum zone, this formation now being one of the most uniform of the deeper sands. Union Oil Company's Bell 59 was completed as a 1600-barrel producer at 5226 feet, while Bellview Oil Company's No. 5 came in with an initial flow of 1300 barrels from 5055 feet.

In dropping back to the Nordstrum zone, the value of the shallower formations is admitted and the tendency to complete wells above 6000 feet probably will grow. Completions in the Clarke zone have been uniformly poor during the past three months and continuation to this zone will be exceptional in the future. The complete absence of new locations is being felt and only the reworking process prevents the field from becoming even less active.

The recent discovery that the Meyer, Nordstrum and Buckbee zones are more dependable than the deeper sands may lead to increased activity when the demand for light oil is pronounced. A gradual decline of the field potential will make drilling to the Meyer and Nordstrum zones more attractive. General conditions will largely determine the course pursued, and if the present surplus of light oil is available little drilling to complete development of the shallower zones will be done. The Meyer zone still has considerable life and the rapid decline of the Clarke and O'Connell zones might be partially offset either by plugging back to the shallower sand or drilling of additional wells.

Huntington Beach, California.—Of the several wells now being rigged up to drill in this field, at least two have been tentatively designated as deep tests. Sentiment for deeper drilling in the townlot sector is very strong, with several local operators inclined toward more persistent efforts toward obtaining new and deeper production. Barnsdall Oil Company's deep test, located just outside the field, has stimulated interest in this type of development.

California Wildcats Not Now at Critical Stage

Los Angeles.—Several important wildcats are being drilled in California, but none of the half-dozen promising tests are in what might be called a critical stage. A few weeks ago two of these more important wells seemed about to open up new producing areas, but the overwhelming odds against the wildcatter predominated and commercial production was not obtained in either well.

Standard Oil Company is approaching a depth of 5000 feet in Gerber 1, a test in the Point Concepcion district, following an unsuccessful production test. The formation is running to hard shell and brown shale. Universal Consolidated Oil Company is drilling below 4000 feet in its

first test in this wildcat area, the well apparently being located higher on structure than Gerber 1.

Chanslor-Canfield Midway Oil Company will continue its production test in Hobson A-2, a probable new field about two and one-half miles southeast of Rincon and lying between this field and Ventura Avenue. A new field at this point would be important, but the leases are held in large blocks and controlled by large companies. Hobson A-2 was drilled to 7480 feet, the rig and equipment having been badly damaged by a recent fire caused from an accumulation of gas.

Although Ohio Oil Company's first test between Kettleman Hills and Coalinga has not reached the interesting stage, this well should reveal the possibilities of the district between the two fields. Shell Oil Company has re-cemented 11¾-inch casing at 4890 feet in Porter Day 1, a wildcat test in the Weed Patch district near Edison, after cutting streaks of oil sand between this level and bottom at 4965 feet.

General Petroleum Corporation has resumed operations in More 2, in the Goleta district, after drilling to 4345 feet and plugging back to 4155 feet. Bolsa Chica Oil Corporation is drilling in tarry shale below 700 feet in Augur Permit 1, an ocean test off Campbell's point and about three miles southeast of Elwood.

Extend Elwood Field West

Santa Barbara, California.—Completion of Signal Oil & Gas Company's Appleford Permit 98-2 in the Elwood field was one of the most important developments of the month, the new producer extending the field more than 1000 feet to the west and virtually proving all intermediate acreage. The well is located on a long pier in the Pacific Ocean and came in with an initial flow of 900 barrels of clean oil from 3685 feet. Tideland activity, which includes wells located exclusively outside the mean high tide line, has been responsible for the large potential production of the Elwood field, this type of drilling having more than doubled the proven acreage.

Several Tests for Oil in Washington

Seattle, Washington. — Several leading California oil companies have obtained leases in various parts of Washington during the past few months and several wells will be drilled under provisions of the lease agreements. Barnsdall Oil Company and Union Oil Company have become interested in this state, acquiring acreage both directly and through local companies. Leasing has centered chiefly on structures lying along the coast, with the Olympia peninsula coming in for considerable attention. Union Oil Company holds leases near the mouth of the Columbia River.

New Producer at Long Beach

Long Beach, California.—Completion of Dabney-Johnston Oil Corporation's No. 52 as a 3000-barrel producer at 7005 feet has added to the long list of new producers at Long Beach and further stimulates activity in the southeast part of the field. Such a large initial production is little short of phenomenal for this stage of development, but the size of the well is accounted for by the fact that it is located in the district which was overlooked during the early part of the deepening campaign.

Large completions have become common occurrences and both the southeast and Los Cerritos sectors are increasingly active. New wells have sent both the potential and active production soaring, where the latter was expected to stage a steady drop. Drilling wells have increased to 110, but many of the active tests are being reworked. Operators are marveling at the ability of the field to increase its production, but a survey of the best completions shows them to be on leases not intensively developed or those which have had few wells drilled to the best levels.

Completion of several good wells in the shallow zone is not as easily reconciled, however, unless the intermediate level between the former shallow production and the main deep production is being tapped accurately.

The Los Cerritos district does not hold as much promise as the southeast sector, but production has been good enough to cause a large number of wells to be started. The experience in this area during the development of the upper zone was disastrous to many operators, and it is with some misgivings that many locations are being made.

California Above Allowable; Curtailment to Continue

(Continued from page 31)

The likelihood of an increased production from new fields is not viewed with alarm and the older fields which had no part in overproduction seem content to operate under the reduced schedule until better conditions are apparent. Several of the smaller fields opposed the curtailment program until it was evident that even the smaller output could not bring a return of normal conditions immediately. The danger of an increased production led to strict cooperation in fields which were regarded as doubtful a year ago. The present allowable is accounting for a larger revenue in the settled fields than the full potential would bring under a reduced crude price schedule, and operators are beginning to realize this fact.

Possibility of an early resumption of drilling at Kettleman Hills does not affect the immediate outlook of the curtailment, but the danger of increased activity and a continuous chain of offsets is readily apparent. Most of the operators are dissatisfied with some phase of the present arrangement and there seems to be a growing restlessness among companies not having offsets to wells now producing. The trouble is centering around wells drilled on fee land and which were not necessarily bound by provisions of the curtailment agreement to remain in effect until July 1, 1931. Several operators are considering steps "to protect acreage," the immediate plans generally considering locations where offsets are necessary.

The offsetting plans are centering in a small area in the northwest flank of the North Dome, but any subsequent completions can only extend the area which must be protected. The secretary of the interior holds the whip hand in the matter of offsets and has been reluctant to grant permits for new locations. He recently gave permission for one company to drill three wells, but reserved the right to name the time at which they should be placed on production. This time apparently will be determined by the needs for light oil. The Kettleman Hills committee is not in accord with the government on some of the questions involved, holding that the government should be bound equally with the operators in every respect. All agree on the merits of a unit plan of operation, but the right to terminate the agreement should be held equally among all concerned, the committee has ruled. It is hoped that the plan will at least check the appalling waste of natural gas at Kettleman Hills, where the pressures are too high to control.

Playa del Rey is a troublesome area and it is evident that complete cooperation along curtailment lines is out of the question. About two-thirds of the operators have agreed to comply with the allotments set by the committees, but some of the smaller companies are known to be antagonistic toward conservation. Production is not yet high enough to affect the whole scheme, but a higher output and unrestrained operations could easily lead to trouble. No price schedule has been posted and hope is entertained that production can be controlled through pipe line allotments. Trucks are now being used to transport most of the oil to nearby refineries.

West Coyote Test

Los Angeles.—Standard Oil Company is deepening Bastanchury 1 to test deeper sands, following the completion of the well as an extension of the West Coyote field. Drilled to 5850 feet, the well came in on the pump with an initial production of 300 barrels. The discovery is considered important, opening up an area which has not been regarded as commercially productive, although some shallow oil has been found in the immediate district.

Salt Lake City, Utah.—Utah Oil Refining Company's wildcat well on the Pariah structure, Kane County, southwestern Utah, has been abandoned at 4375 feet. There were no showings of gas, oil, or water in this test. The well was drilled by Midwest Refining Company for the account of Utah Oil Refining Company.

Louisiana--Arkansas Field Notes

Caddo Parish Test Is Disappointing; New Bienville Parish Field Likely

SHREVEPORT. — R. W. Norton's Hill 1, Section 33-23-16, north Caddo Parish, Louisiana, in which a gas show had been encountered in oolitic lime in the upper Trinity horizon, proved a disappointment, bailing dry after plug was drilled during the last week. Total depth is 5315 feet and 6⅝-inch casing was set at 5165 feet. No show of either oil or gas was encountered during bailing.

In the meantime possibility of an oil producing area in a wildcat section of Bienville Parish, Louisiana, is seen as the result of a drill stem test in W. A. Nichols and associates' McDermott 1, NW NE Section 28-18-6w, where one fourble of drilling mud and 10 feet of 35.5 gravity oil was tested through drill stem in the Nacatosh horizon at 2253 feet. A broken formation was encountered from 2184 feet to bottom of the hole. Six and five-eighths-inch casing will be set for a test. A mild interest was aroused by the test, which is about 10 miles south of the recently opened Trinity gas producing area in the Sugar Creek district of Claiborne Parish. Arcadia is the rail head for Sugar Creek and the wildcat test which showed oil. Close-in leases are bringing $15 to $25 per acre with some trading in royalties.

Triangle Drilling Company and associates, including Standard Oil Company of Louisiana, and Louisiana Gas & Fuel Company, have made location for another test in Sugar Creek. This will be Cox Fee 1, in the center of NW SW Section 6-19-5w, Claiborne Parish, three-quarters of a mile from the owner's Caskey 2, in the same section, which was recently completed making 19,908,000 cubic feet of gas in the upper Trinity with gasoline content of 793 gallons per 1,000,000 cubic feet. The first commercial gasser in the area was Kilpatrick 1, owned by the same group in Section 7-19-5w, which made 2,000,000 cubic feet of gas and a spray of 25 barrels of heavy oil daily.

The owners of these wells have a block of 8500 acres and own the Cox land in fee. They plan to build a gasoline plant on the Cox land in Section 6-19-5w, and after extracting the gasoline run the gas to the Arkansas Natural Gas Corporation's Monroe-Latex trunk gas line which is 10 miles to the south. Details of the gasoline plant's size, time of starting operations, etc., have not been announced.

Ten miles northeast of the two Trinity formation gassers in Sugar Creek, Arkansas Fuel Oil Company is reaming out to bottom at 4001 feet in anhydrite, having topped red beds at 3305 feet. Gas was obtained in oolitic lime at 4339 feet in Caskey 2 in Sugar Creek.

Toteco Oil Corporation's Louisiana Long Leaf 1, Section 18-6-12, Sabine Parish, nine miles south of Zwolle production, which had a gas blowout at 4065 feet in a lime formation, probably in the Eagle Ford or Woodbine, has been able to get another core from 4075 to 4077 feet. The core showed porous lime. Later returns were lost and another blowout occurred, the hole bridging at 2500 feet. This bridge is being drilled out.

Lenz and associates, who claimed a drill stem test of 430 feet of oil in 10 minutes in Johnson 1, Section 24-15-26, Miller County, Southwest Arkansas, a wildcat test, have set six-inch casing at 2844 feet with total depth of 2847 feet and are waiting for cement to set.

Two Fields Extended

Extensions in two fields which were recorded during the last week were of small capacity. Arkansas Fuel Oil Company's C. B. Scott 2, Section 32-14-13, Holly district, De Soto Parish, Louisiana, a mile northeast of the four producers in Section 5-13-13, was standardized at total depth of 2790 feet in the Woodbine pumping 50 barrels of fluid daily, 50 per cent salt water. The well offsets a salt water hole in the same 40-acre tract. It is presumably an edge well of the small pool which is now fairly well defined as a small pimple. However, the fact that a 40,000,000-foot gasser was obtained in the Woodbine three miles southwest of the four producers, has led to the theory that the producing area is located on a fault. Two miles west of production Lacy Oil Company abandoned Sample 1, Section 1-13-14, as a salt water well at total depth of 2925 feet.

The Sarepta field of Webster Parish was extended four miles north by Magnalia Petroleum Company's Gardner 1, Section 1-23-11, which is pumping five barrels of oil and 300 barrels of salt water at total depth of 2727 feet.

The East Carroll gas field in Northeast Louisiana, where there are at present four gassers, all owned by the Palmer Corporation and associated companies, added its fourth and largest gasser during the week when Louisiana Gas & Fuel Company's Hicks 1, Section 12-19-10e, was gauged as a 47,883,000-foot gasser at 2340 feet, with 1080 pounds rock pressure. Eight and one-eighth-inch casing was set on top of gas rock at 2333 feet. This is the first of the quartet of gassers not showing salt water. The discovery well of the area was Palmer Corporation's O'Brien 1, completed in May, 1928, gauging 51,119,250 cubic feet of gas. Two gassers were added during 1929.

In the Richland Parish gas field Southern Carbon Company completed J. A. Hemel 1, Section 1-16-6e, as a 40,320,000-foot gasser at total depth of 2440 feet with rock pressure of 2440 feet.

Three for Cartersville

Arkansas Fuel Oil Company completed three small producers and one dry hole in the Cartersville oil field of Bossier Parish, the largest of the three producers being Barnett B-4, Section 36-23-12, which is flowing 187 barrels of oil at 3153 feet, 6⅝-inch casing having been set at 3120 feet. While not yet having a 24-hour gauge The Texas Company's Wilkinson 12, in the same section, was completed at a depth of 3154 feet flowing on the first 19-hour gauge at the rate of 530 barrels daily. Both wells are in proven territory.

While Zwolle did not enter the completions column during the week, R. L. Gay, Trustee's, Bowman-Hicks 8, Section 18-7-13, 1¼ miles east of the producing area in west Zwolle, which had been temporarily abandoned at 2488 feet in chalk rock, later rising 1000 feet in hole, made a 100-barrel head while being bailed. It will be standardized. Gay is rigging up for another test just west of production in west Zwolle, the new test being Sabine 5, SE NE Section 15-7-14, all present production in that part of the field being so far confined to Section 14-7-14.

Lion Oil Refining Company and D. M. Lide, who started the drilling campaign

in the Zwolle townsite last winter by a three-mile western extension of the Zwolle east field, will drill Sabine 3, SE NE Section 31-8-12, of this section. The Zwolle townsite drilling program, due to the uncertainty of the chalk rock, has practically faded out. Loring Oil Company, a half mile northeast of the original 12-mile extension well of the Zwolle east field, made location for Sabine 2, SE NE Section 34-8-12.

Pelican Natural Gas Company, in order to carry out drilling obligations, have made location for two more wildcats southeast of Zwolle east field production and has spudded in Louisiana Long Leaf 3, Section 4-7-11, and is drilling at 675 feet after setting 12-inch surface casing at 96 feet. Rigging up is under way for Sabine 3, SE NW Section 6-7-11.

Arkansas Louisiana Pipe Line Company will drill an offset to its small gasser recently completed in Johnson 1, Section 7-11-13, De Soto Parish, rigging up being under way for Johnson 2, SE NW of this section. This lease was taken over from Loring Oil Company.

Falcon Drilling Company has taken over I. N. Pharr's Oden 1, Section 19-19-14, an outside test to the southwest of the Dixie field of Caddo Parish, which was abandoned at 2409 feet, and will drill deeper.

Officials of the three companies conducting a repressuring of the Haynesville, Louisiana, oil field, inspecting one of the key wells in the area being repressured. Reading left to right they are: A. S. Hasson, general superintendent, Ohio Oil Company, Shreveport; M. H. Flood, repressuring engineer, Haynesville; E. B. Charlton, superintendent gasoline plants, Ohio Oil Company, Haynesville; E. Clover, superintendent gasoline plants, Reserve Petroleum Company, Haynesville; J. K. Kerr, vice-president, Ohio Oil Company, Shreveport; W. H. Vaughn, superintendent gasoline department, Gulf Refining Company, Shreveport; M. E. Waldron, manager producing department, Louisiana Oil Refining Corporation, Shreveport, and C. W. Warwick, general superintendent gasoline department, Reserve Petroleum Company, Camden, Arkansas.

Repressuring Project At Haynesville Successful

Repressuring of the Haynesville oil field of Claiborne Parish, Louisiana, which started last spring with 13 key wells, has proven so satisfactory in its preliminary results that at a general field meeting of the Louisiana Oil Refining Corporation, Ohio Oil Company, and Reserve Petroleum Company, held at Haynesville recently it was decided to add 15 additional key wells. One key well is used to nine wells into which gas is being pumped.

While 40,000 cubic feet per day was started with for each key well at present 60,000 feet per day is being used.

In the area involved by the first 13 key wells tubing has been raised from seven to 12 feet per well which is equivalent to raising the fluid level that amount.

The additional key wells are being added south of the area in which the first repressuring was done as it was found that the gas was migrating in that direction.

Results obtained from the area served by the first 13 key wells has been highly satisfactory, according to officials of the companies participating in the project. No one has lost production by the installation of the repressuring plan and operators could have taken additional production. No definite date was announced as to when production from the repressured wells will be taken on a wide scale. The immediate goal is to raise the fluid level which will give a better operating condition.

This is the first repressuring project of this magnitude undertaken in North Louisiana or South Arkansas, although Gulf Refining Company has conducted a repressuring project on a smaller scale in the old Bull Bayou district of Red River Parish, with satisfactory results.

The present project is being watched with interest and with satisfactory results expected from the Haynesville repressuring, the plan is likely to be used in several other fields in this territory, particularly in the Louann area of the Smackover field.

Three Sarepta Locations

Three new locations were made in the Sarepta field, Slack 1 and 2, SW SE Section 36-23-11 by Jimmie Liggitt and one by K. C. Supply Company in Slack 3, in the same section.

The Urbana district of Union County, Arkansas, added its third commercial producer during the week when Marine Oil Company's P. Winn Estate B-3, Section 10-18-13, was put on the beam at total depth of 3559 feet. It is pumping 180 barrels of oil and 1080 barrels of salt water daily. As blowing the discovery well in the same sections has been a success, its fluid yield having been boosted from 1200 barrels daily to 7000 barrels daily, 14 per cent oil, it is likely the same tactics will be used on this test. Elevation of the new well is 173 feet.

Magnolia Petroleum Company deepened Grayson 1, Section 21-15-19, a semi-wildcat in the Stephens district of Ouachita County, Arkansas, to 2184 feet where it was completed pumping 20 barrels of oil free of water. It was a 50-barrel pumper in the 1500-foot zone. C. F. McDonald has abandoned Black 1, Section 12-13-28, a wildcat in Little River County, Arkansas, as a dry hole at total depth of 2180 feet. No casing was set except surface pipe.

East of the Champagnolle field of Union County, Tidal Oil Company tested dry through drill stem in Arkansas Timber Company 1, Section 3-16-14, Calhoun County, from 2092 to 2131 feet, and is drilling ahead below 2200 feet. In the same general area but over in Union County, Sunby and associates' Perdue 2, Section 3-16-14, is shut down at 3207 feet.

Mississippi New Drilling On Increase

Jackson, Mississippi. — With 18 rigs up in the Jackson gas field, 13 being in Hinds County and five in Rankin County, Mississippi, indications are that within a fortnight there will be 10 to 15 more up with several, already up and not yet active, spudded in as a result of important developments in the last three weeks in this area where there are now five commercial gassers.

The blowing in of Pearl River Oil & Gas Company's Littlefield 1, Section 12-5-1e, Rankin County, at total depth of 2393 feet, with four feet of Midway chalk, the highest gas has yet been encountered in this area, as an estimated 40,000,000 to 50,000,000-foot gasser, will

unquestionably cause a more extensive drilling campaign not only because of its size and general influence on operations here but also because there are several small tracts offsetting this gasser which will require active operations as soon as any gas from this well is marketed.

Ohio Oil Company owns 20 acres offsetting the Littlefield immediately to the north. It is regarded as likely that this company will start a test immediately on this tract, the L. J. Payne, in the section with the gasser.

Gulf Refining Company having completed Rainey 1, Section 13-5-1e, as a 15,000,000-foot commercial gasser, after plugging back from 3607 feet to 250 feet at top of the Midway chalk, will undoubtedly start its other two originally planned tests on the 7000-acre tract acquired from Home Oil Producing Company. It is likely that Gulf Refining Company will drill four more tests immediately and possibly seven more. M. O. Rife, production superintendent of that company, was here during the week for working out details for the second test. E. V. Whitwell, geologist for Carter Oil Company, which has acreage near the Rankin and Hinds County gassers, left for Tulsa to report the situation to company headquarters in person.

Pearl Valley Oil & Gas Company's Moter 1, Section 12-5-1e, Rankin County, will be the next test for the Jackson area. Six and five-eighths-inch casing has been set in black Midway shale at 2415 feet for a test; 100 sacks of cement were used. It is planned to first tube the well and bring it in by that method.

While no definite locations have been made as the holes are merely shallow tests, a series of operations is under way in Newton County, 20 miles west of Meridian, and seven miles east of here, by Mississippi Petroleum Company in which Anthony Gibbons, a pioneer in the development of the Urania, Louisiana, oil field, is interested. Operations center around the village of Hickory in townships 5 and 6, north and ranges 12 and 13 east.

In the Natchez area of Southwest Mississippi A. C. Glassell and associates, including Louisiana Gas & Fuel Company, said to be half owners, are drilling below 1300 feet in Belzhoover et al 1 (formerly Fee 1), in Section 1-2n-5w, Wilkinson County, after setting 12½-inch casing at 465 feet. This will be a 4000-foot test, it is now reported. The same operators are clearing title and have not drilled ahead in Stowers 1, Section 25-8-2w, Adams County, after setting surface casing at 246 feet. Louisiana Gas & Fuel Company have blocked 150,000 acres in this area, it is said. Glassell has over 150,000 acres extending over into Concordia Parish, Louisiana, where his Pittsfield plantation 1, Section 41-8-10e, recently showed 6,000,000 to 10,000,000 feet of gas and some salt water in the lower Jackson and upper Claiborne at total depth of 1453 feet, casing having been set at 1370 feet. Plug has not been drilled since the gas show.

News From Rocky Mountain Fields

Wyoming Oil Line

Casper.—Announcement was made here last week of the intention of the newly-organized Wyoming-Montana Pipe Line Company to lay a 160-mile line from the black oil fields of the western Big Horn Basin in Wyoming to refineries at Laurel and Billings, Montana, for cracking. Ray Phebus of Thermopolis is president of the company which has asked for a certificate of convenience and necessity from the Interstate Commerce Commission.

The oil fields which this line would serve are at present capable of producing 20,000 barrels per day from the known producing formations; other possibilities to be expected from more wells in proved fields, from lower formations, and from other new fields are not reckoned.

Laurel and Billings, being on the Northern Pacific and the Great Northern railroads present ideal locations for refineries on transcontinental lines; they are also on the border-to-Gulf line of the Burlington railroad which runs north from Denver through Cheyenne to Casper. Thus is provided more and better transportation facilities than is offered by any other similar point in the Rocky Mountain region to serve the northwestern markets.

Wyoming Wildcats

Casper. — Among the several wildcat wells scheduled to be drilled in Wyoming this summer is one which the Bowser-Satterfield Syndicate of Parkersburg, West Virginia, will drill in Niobrara County, on 7-35-62; another to be drilled in Crook County, northeastern Wyoming, by local interests, and one to be drilled on Martin Dome, in Weston County, eastern Wyoming, by LeFaivre Oil Syndicate of Detroit. This part of the state is attracting particular attention this summer and it is believed that its first thorough testing will come at this time.

Auction of Ute Lands

Washington.—The Department of the Interior announces the auction sale of gas lease on the Ute Indian Lands in New Mexico, August 2, 1930. The auction of the lands will be held at the court house in Santa Fe, New Mexico, by the superintendent of the Consolidated Ute Indian Agency. Legal subdivisions of the land are as follows: W½ NW Section 23; W½ W½ Sections 14, 15, 16, 17, 20, 21 and 22; NE NE Section 29; N½ NE SW, N½ SE Section 28; NW Section 27, Twp. 32n, R. 14w, containing 4720 acres.

The lease will be made for a period of 10 years from date of approval by the Secretary of the Interior or as long thereafter as the gas is produced in sufficient paying quantities. Written applications will be received for the lease and anyone who cannot be present on the date of the sale may be represented by an agent, providing such agent has duly executed power of attorney. Further information on the sale may be had upon application to Edward J. Peacore, Superintendent of the Consolidated Ute Indian Agency, Ignacio, Colorado.

Dry Lakes

Denver. — Among the wildcat wells which will be drilled this summer on structures in Colorado is that which W. A. Myers and associates of Denver will drill on the Dry Lakes structure, 45 miles west of Craig, northwestern part of the state. Mr. Myers was identified with the discovery and promotion of Hiawatha Dome operations.

Baggs Structure

Rawlings, Wyoming.—Producers Oil & Gas Company, and Red Feather Oil Company, joint developers of the Baggs structure in southern Wyoming, announced last week that they would allow the well which they have been drilling for the last two years to stand at its present depth—2100 feet—pending the completion of another well which is to be started immediately. The first well had some 5,000,000 feet of gas at 750 feet, and then about 20,000,000 feet around 2100 feet. Gas will probably be piped to Baggs to supply that community with fuel.

Alkali Battle

Casper.—What may amount to a really good producer on the old Alkali Butte structure is Texas Production Company's deep test which on drilling into the Dakota last week had about 10,000,000 feet of gas and was spraying oil as it penetrated the formation. This field has long been proved for small shallow production, but this is the first deep test on the structure.

Hamilton Dome

Thermopolis, Wyoming.—Empire State Oil Company tested its Tensleep well in Hamilton Dome field last week and reports that the well made an average of 222 barrels per day on a 15-day test. The well was deepened to the Tensleep last year, but had never been tested. It is the only well in the field to have been drilled to this deeper sand, and proves that horizon in this field.

Crooked Hole Surveying Made Simple by Syfo Clinograph

(Continued from page 39)

Winn's invention of the SYFO Clinograph (patents pending). This instrument consists of an outer protective casing and an inner brass column containing the recording mechanism. (Fig. 1 shows the operator lowering the brass column into the outer casing). The outer casing (seven-inch Fig. 2) is closed at both ends by conical-shaped steel plugs. The brass column consists of four sections, an orifice chamber (3), delivery chamber (6), the recording chamber (9), and the receiving chamber (11). In operation, a definite amount of recording liquid is poured through the removable strainer (2), into the orifice chamber. The liquid immediately begins the discharge through an orifice (4), into the delivery chamber and fills the latter slowly until the surface of the liquid reaches the top of the bend in the large siphon (5). The time consumed in filling the delivery chamber to this point is the time necessary for lowering the instrument to the desired depth, plus a few minutes for safety. This time may be varied by different sized orifices and four different orifices are furnished with each SYFO Clinograph.

The liquid discharges from the delivery chamber through the long leg of the siphon into the bottom of the recording chamber in which a sheet of record paper (9) is located. As the liquid reaches the top of the small siphon some recording liquid discharges through it into the receiving chamber, but the inflow into the recording chamber being faster than the outflow, the level continues to rise until air is drawn through the top siphon. Immediately, the level drops and all the liquid is siphoned into the receiving chamber, leaving a stain on the cross-section paper, showing exactly the relation of the surface of the liquid to the vertical axis of the brass column at the depth at which the test is made. As no recording liquid remains in the record chamber, the record cannot be blotted or ruined after it has been made.

During a run the recording sheet is expanded against the wall of the recording chamber in the form of a cylinder. When this recording sheet is removed from the instrument and opened out the observed curve is the same as if an acid bottle had been cut open and rolled out in one plane. An actual curve made with the instrument is shown in Figure 3. This wavy curve has no thickness, as it is the line of demarcation between the dark recording liquid and the white paper. The angle is directly proportional to the vertical distance between the high and low points on the curve. To make the record direct reading, the cross-sectional divisions are printed of such a size that each is equivalent to one degree. Consequently, the number of divisions counted vertically between the high and low points on the curve is equivalent to the number of degrees of deviation from the vertical. Due to the effect of surface tension on readings above 10 degrees, a correct scale for reading the angle of inclination is printed at the top of each sheet, taking into consideration the change in the tangent as well as the effect of the surface tension. Measurement of the vertical distance between the high and low points with the scale on one of the extra sheets gives the correct vertical deviation.

The advantages of the SYFO may be briefly summarized as follows:

1. Its use gives a direct and accurate record of the vertical inclination of the bore hole.
2. The record is easily obtained, without the use of acid and without exposing the operator to the complications and dangers inherent to the use of the acid bottle.
3. The test is made in less time.
4. The record is made on paper which can be kept for reference purposes without occupying much space.
5. The daily use of the SYFO will enable the driller to immediately correct any deviation of the hole from the vertical and prevent unnecessary expenditure for drilling operation.
6. SYFO being ruggedly built of metal will not wear and will last over a period of years without decrease in efficiency.

All the foregoing advantages make SYFO a desirable tool to any efficient drilling operation, and its use will soon bear dividends which will be expressed not only in percentage, but also in multifold appreciation.

The SYFO Clinograph is manufactured by the Sperry-Sun Well Surveying Company with headquarters at 1608 Walnut Street, Philadelphia, Pennsylvania. Branch offices are maintained at Dallas, Texas, and Tulsa, Oklahoma. The company contemplates opening other branch offices to service more distant fields. The SYFO is not sold. It is leased at nominal rates.

QUESTIONS

1. What is the present state of Poland's petroleum industry?
2. What was the production total of petroleum for Oklahoma in 1929?
3. Where is there a good example of the economic handling of rotary mud waste, tank bottoms, and general field waste?
4. What were the first three leading producing oil companies during the first quarter of 1930?
5. What recent contribution to public safety did Standard Oil Company of California contribute?
6. What are the specific rights and privileges of a member of a unitized oil area?
7. What is the best type of field gathering system, and why is an economic system so important?
8. What are the accepted methods of treating emulsified petroleum?
9. For purposes of determining its valuation, how is acreage classified?

(*For Answers See Page 104*)

Coming Up

(Continued from page 29)

Crude Market, etc.)

2. Graphic Explanation of Field Activity for First Six Months 1930. (Including: Oklahoma City, Darst Creek, Hobbs, Gray County, Bradford, Santa Fe Springs, Long Beach, Seminole, Refugio, Humble, Yates, Winkler County, etc.)
3. Tabulated Crude Oil Price Changes.
4. Special Discussion on What Constitutes Normal Crude and Refined Oil Stocks.
5. Natural Gas Developments in The Texas Panhandle.
   GEORGE REID, *Staff Representative*
6. Comparison of Drilling Wells First Six months of 1930 with Same Period 1929.
7. Projected Crude Oil Production for 1930.
8. New Developments in Pipe Line Work. (Tabulation.)

Field Development

(a) West Texas, North Central Texas, North Texas, Panhandle, New Mexico.
H. H. KING, *Staff Representative*

1. Review of Field Development and Forecast for Balance of 1930.
2. Dry Hole Record for All West Texas Districts.
3. West Texas Storage Situation.
4. Discovery Well Tabulation for West Texas.
5. Insert Map of New Mexico showing Field Activity.

(b) Gulf Coast, Texas and Louisiana.
JACK LOGAN, *Staff Representative*

1. Review of Field Development and Forecast for Balance of 1930.
2. Insert Map of Principle Fields.

(c) Oklahoma and Kansas.
FLOYD SWINDELL, *Staff Representative*

1. Review of Field Development and Forecast for Balance of 1930.
2. Special Review of Oklahoma City Field including geology—Mechanical Problems—Economic Aspects and Present Drilling Activity.
3. Insert Map of The Oklahoma City Field.

(d) California.
BRAD MILLS, *Staff Representative*

1. Review of Field Development and Forecast for Balance of 1930.
2. Insert Map of Most Interesting Field at this Time.

(e) Other Domestic Fields.

1. Reviews of Field Development and Forecasts for Balance of 1930 on other Districts not included in the above.

WITH THE MEN IN THE FIELD

W. W. Brooks, left, repair man and W. P. Guinn, right, chief engineer of the Webster, Texas, station of Humble Pipe Line Company. The Webster station is generally acknowledged as being one of the best looking stations on the entire Humble system. In addition to the modern equipment on the tank farm and in the pump station, the Webster plant boasts of grounds and flower gardens, fish ponds, etc., that constitute a regular show-place for visitors.

L. T. Wade, field superintendent, Houston Oil Company, at Lucas gas field, Live Oak County, Southwest Texas (left), and W. C. "Bill" Andrus, sales representative, Cameron Iron Works, Houston. Together they overcame some difficult problems in connection with production of natural gas from the loose sands at Lucas.

R. W. Hodges, left, is production superintendent for Rycade Oil Corporation, and Dave Barksdale, right, is in charge of that company's properties at Bayou Bouillon, St. Martin Parish, Louisiana.

W. H. Dommert, pumper for Gulf Production Company at Barbers Hill, Texas Gulf Coast, with electric pumping unit of Fisher 1 in background.

This well, completed for 900 barrels initial production at 5600 feet, was also drilled by electric power, with an "OIL WELL" Hild Differential Drive.

Fisher 1 is on a lease of about 30 acres on the south flank of Barbers Hill dome.

Ralph Walkingstick, scout for Tidal Oil Company in the Shawnee, Oklahoma, district, is president of the Mid-Continent Scouts & Land Men's Association. Ralph is one of the most popular figures in scouting circles of Oklahoma and Kansas. He is of Indian descent and was born at Tahelquah, Indian Territory, August 17, 1896. He attended Dartmouth College as a member of the class of 1918 where he was a football end and a member of the student governing body. He saw service with the British Army during the World War in Egypt, South Africa and Mesopotamia. He is married and has four children. His service with Tidal Oil Company totals four years.

"Red" Smiley, driller for the Wofford Drilling Company on its north extension well to the St. Louis, Oklahoma, field, drilled jointly with the Atlantic Oil Producing Company.

Geoelectrical Exploration Methods Used in Oil Fields

(Continued from page 36)

above theory, which has been extended to take in any number of conducting beds. However, since such a "complete" procedure is very laborious and time wasting, it is generally carried out only for a few "key" stations within a certain area of investigation; for all other stations a simplified procedure is then applied, which experience has shown to be sufficiently accurate. After the computation and interpretation of the field data the result of a survey by the above electromagnetic method is thus a structure may, showing contour lines drawn on some outstanding electrical key bed occurring at some 200-1500 feet depth. In this connection it may be pointed out that a "key bed" mapped in the above way really takes in a number of beds, or members, of a subsurface formation, and that the electrical key bed is therefore not likely to be greatly affected by changes in the thickness or conductivity of a few of those individual members.

Such a survey is much faster and cheaper than core drilling, for which it offers a substitute. The speed and cost of the work also compare very favorably with torsion balance work: a team of two engineers and 10 assistants can complete five to 15 stations per day, or on an average 250 stations per month; the number of stations required per square mile varies from four to 30, depending on the amount of detail required.

The Sundberg electromagnetic method has been applied to a number of different structural problems in Texas, Louisiana and California, the total area surveyed in these states is over 1500 square miles.

Sinclair Safety Winners Save Life of an Infant They Never Saw

IT is something of a long jump from the winning of first honors at the First Aid Meet of the 1929 International Petroleum Exposition and Congress to the saving of the life of an infant in the St. Louis field of Greater Seminole. But the two are linked by a series of steps which give unimpeachable evidence of the value of the prone pressure method of restoring respiration, as well as the wisdom of spreading the knowledge of the method throughout an industry.

Members of Sinclair Oil & Gas Company's first aid team in the Healdton district may not know that they played a part in saving the life of the infant. None was nearby when the wife of a teamster brought the youngster back to breathing, still each had a part, however indirect.

This Sinclair team came up for the 1929 annual First Aid Meet of the Exposition and through dilligent application of its knowledge and skill came away with the awards of first place in its possession.

As a reward for winning this honor and also to stimulate interest throughout the whole Sinclair organization, this team was sent about over Oklahoma to demonstrate its skill in other Sinclair centers.

In December the team happened to be in the St. Louis field of the Seminole area. One of the spectators was Art Brown, a teamster. Brown did not even work for the Sinclair company. He was then working for Joe Long, a contractor, who had some work for the Sinclair company. But Brown sat through the whole first aid demonstration and paid particular attention when the prone pressure method of restoring breathing was given.

To him it bordered on the miraculous that a person, who had ceased to breathe, could be made to breathe again by the proper application of pressure. So he carried the word of such a happening to his wife and to her he explained how the prone-pressure method should be used.

As yet the prone-pressure method has not reached the infant and the knowledge of how to restore breathing is several steps removed from any person, tediously trained in it. Members of the Sinclair team knew, for they had studied under the supervision of experts. But Art Brown did not know. His knowledge consisted of what he saw and what he heard that night at St. Louis. Then he took it to his wife, who did not have even the benefit of the demonstration by members of the team.

It was in January, 1930, a period when the thermometer hung down below zero for several days, that the gas went off in the home of a young couple, who lived near Art Brown and his wife. This young couple decided to seek a house where there was heat and found it in the Brown home. The infant was wrapped in blankets and carried to the Brown home.

When it arrived there, it was discovered that the infant was not breathing. Whether the gas had come on back in their home, asphixiating the youngster, or whether it had been smothered when wrapped against the cold weather was never known.

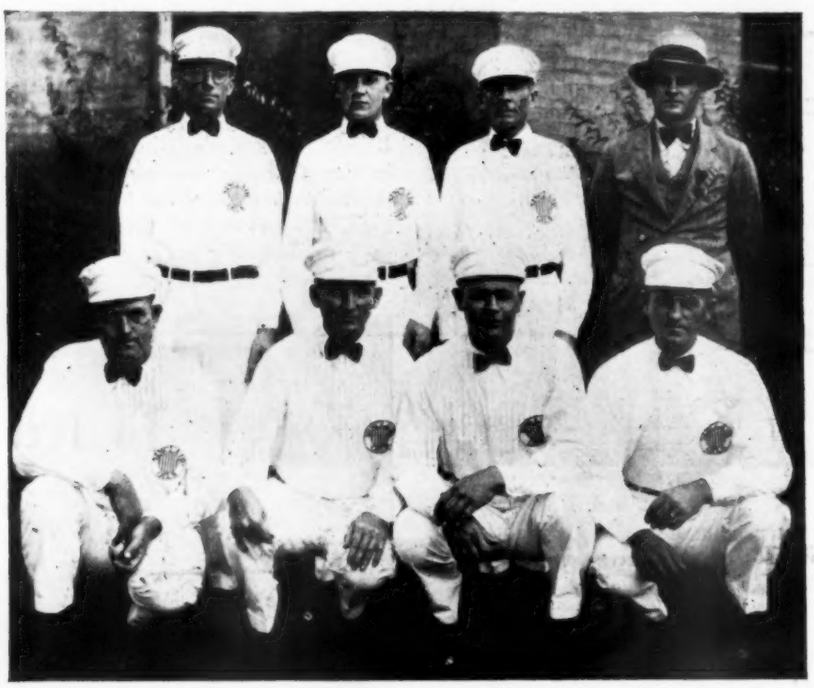
At any rate the scene consisted of an infant, which was dead, a frantic mother and father and a woman who had heard of a strange procedure, known to first aid work as the prone-pressure method of restoring breathing.

So Mrs. Art Brown set to work, following as best she could the steps which her husband had related. Just how well she followed what the first aid instructors would stamp as proper procedure is beside the question.

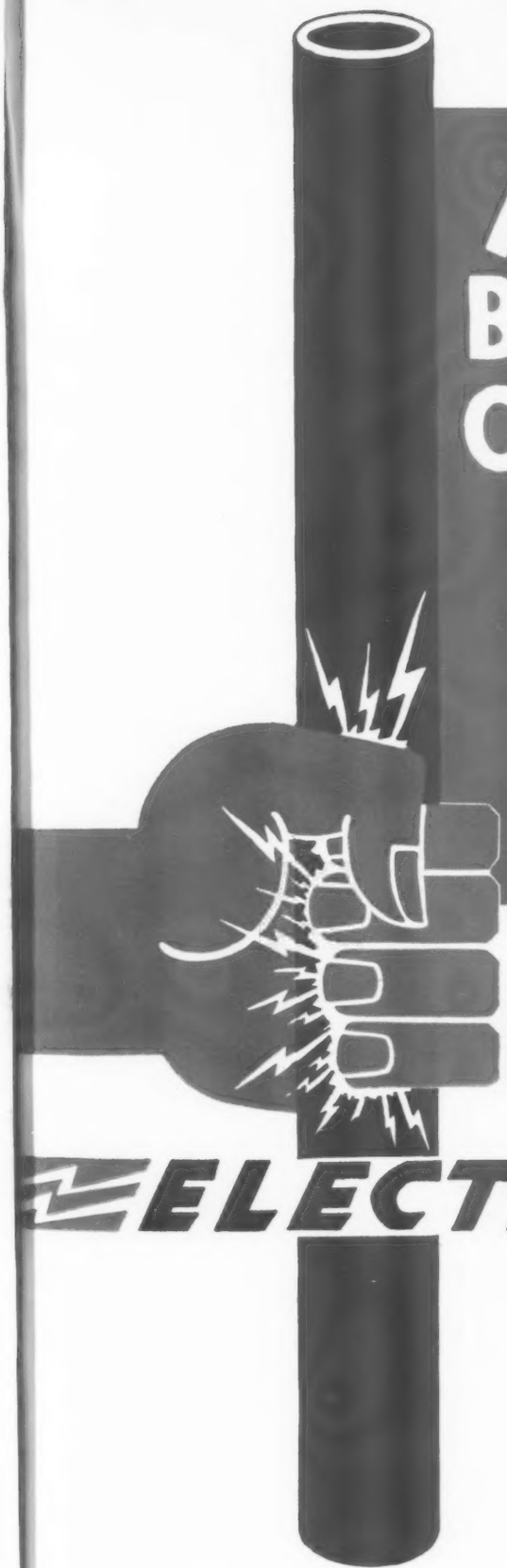
For that youngster is alive today.

Whether to give credit to the members of the Sinclair team for winning first place at Tulsa, or to Art Brown for paying attention when he listened and watched at the St. Louis demonstration or to his wife who set to work, despite her lack of experience is another question beside the point.

The pinnacle of the whole matter is that first aid training bears results, even far removed from an oil lease.



Back row—J. R. Bashears, rod wrencher; J. A. Stribling, truck driver; J. A. Nicholson, pulling machine foreman; F. F. Thomason, first aid instructor. Front row—R. A. Gardner, pumper; J. A. Robison, pumper; J. L. Ashford, rod wrencher, captain; L. C. Jones, blacksmith



A BETTER METHOD OF MAKING PIPE

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REPUBLIC STEEL
CORPORATION

REPUBLIC ELECTRIC WELD PIPE

MADE BY A NEW PROCESS
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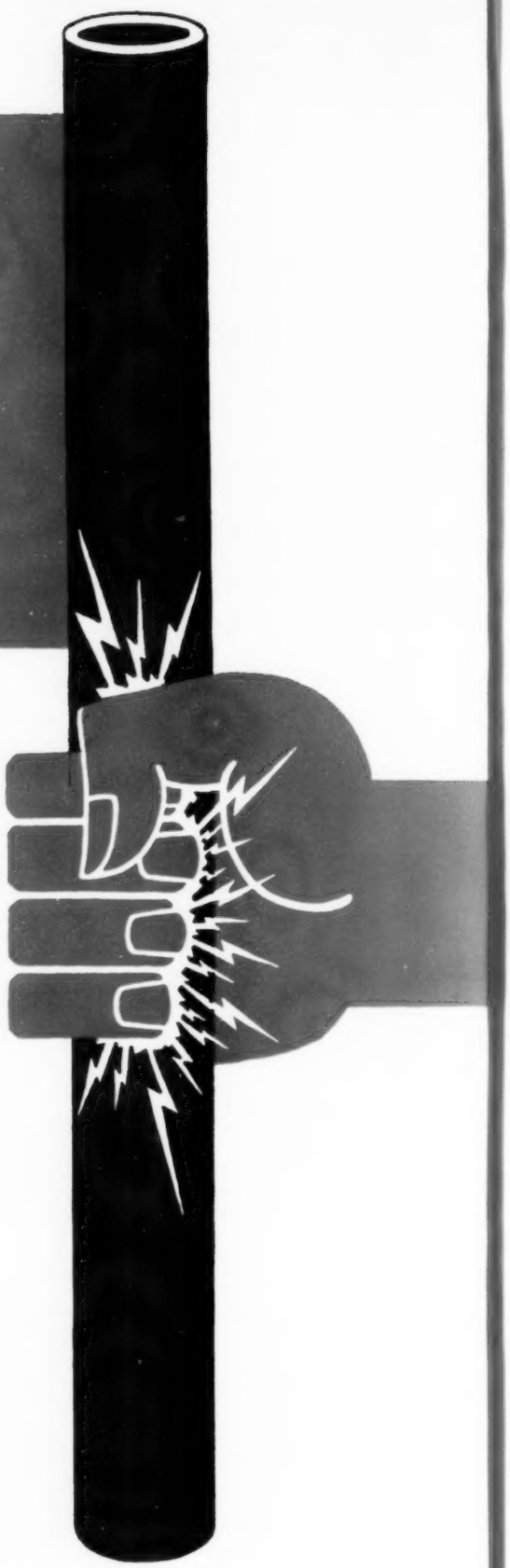
REPUBLIC STEEL CORPORATION
YOUNGSTOWN . OHIO . . . . .

BACKED BY A MILL AS MODERN AS THE METHOD



Blazing a trail far removed from all established pipe manufacturing practice, Republic Steel Corporation has completed a new plant to be devoted to large scale production of Republic Electric Weld Pipe.

The product of this plant offers many advantages. Tests and actual service prove the weld to be one hundred percent—perfect—stronger than any other part of the pipe. Wall thickness is uniform and the finished pipe is perfectly round, smooth and free from scale and oxide.

Over one thousand miles of Republic Electric Weld Pipe have been placed in service without a single record of leak or defect—without a single complaint of any kind,—convincing evidence of the quality and uniformity of this mechanically perfect pipe.

REPUBLIC *ELECTRIC WELD* PIPE

REPUBLIC STEEL CORPORATION
YOUNGSTOWN, OHIO

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
ELWOOD—		
Bankline Oil Co., Permit 89-3	1500	3390
Elwood Exploration Co., Permit 90-4	2350	3420
LONG BEACH—		
Exeter Oil Co., Coleman 1	100	6725
James Oil Co., No. 6	300	7050
Power Pet. Corp., No. 1	120	5320
Shell Oil Co., Wilbur 5	3400	5220
POTRERO—		
Pan Cal Oil Corp., No. 1	400	5230
ROUND MOUNTAIN—		
Shell Oil Co., Freeman 8, 20-28-29	175	1620
SANTA FE SPRINGS—		
Union Oil Co., Alexander 22	400	7930

OKLAHOMA

Company, Well and Location	Initial Production Bbls.	Depth
CARTER COUNTY—		
L. J. Woodruff, Watkins 1, ne c 22-1s-3w	*	520
COTTON COUNTY—		
Shasta Oil Co., Burneaugh 8, cnl ne se 2-2s-10w	125	2201
Silurian Oil Co. et al, Chambers 5, cnl ne nw 2-2s-10w	*	2154
Harris and McNeal, Chambers 6, se c ne nw sw 1-2s-10w	*	2180
CREEK COUNTY—		
E. L. Robinson et al, Davis 1, sw c nw 21-19-9e	100	2207
Phillips Pet. Co., and Gled Oil Co., Carter 2, nw c ne se 20-19-9e	125	2235
Ireland and Dean, Bible 2, cel ne sw 20-19-9e	160	2240
Cooney, Henry et al, Grayson 1, nw sw se 10-17-9e	*	2065
J. H. Markham, Jr., Prentice-Johnson 2 (owdd) cnl ne nw 2-19-7e	*	3008
GRADY COUNTY—		
Meridian Gas Co., Haynes 1, csl sw sw 30-4n-7w	¶29	2228
JEFFERSON COUNTY—		
Sutherland Oil Co., Riverbed 2, nw c ne ne 10-7s-5w	50	1263
Kiel and Wylie, Seay 1, sw c nw sw nw 35-6s-5w	*	1818
LINCOLN COUNTY—		
Magnolia Pet. Co., Benedict 1, se c nw 7-14-4e	5348	5039
Prairie, Norton 3, sw c ne 7-14-4e	8478	5001
T. B. Slick and Prairie, Wolfe 1, nw c 16-14-4e	*	5010
MARSHALL COUNTY—		
Magnolia, West Rutland Co. 2, sw c se se nw 30-5s-6e	75	646
Bilbo Oil Corp., Davis-Sullivan 4, se c ne sw nw 30-5s-6e	75	664
Otto Reynolds, Davis-Sullivan 2, sw c nw se nw 30-5s-6e	80	656
J. D. Loffburrow, Kraer 1, nw c sw 25-5s-5e	*	912
Bilbo Oil Corp., Taliaferro 13, nw c ne se se 14-5s-5e	*	616
J. C. Walker et al, Parks 1, nw c ne nw 5-5s-5e	*	675
MUSKOGEE COUNTY—		
W. E. Lightner et al, Beams 4, cnl sw sw 19-14-16e	20	1570
H. L. Jolly, Carolina 7, sw c nw sw 9-15-18e	165	917
P. Boyle et al, Ware 1, c s½ ne 14-15-15e	¶1¼	1431
Mack Drlg. Co., Richards 4, ne c sw nw ne 33-16-15e	5	1412
L. F. Crow et al, Schoonover 1, sw c nw ne se 10-13-18e	*	1737
C. D. Bradley, Anderson 1 (owdd) nw c sw 26-15-19e	*	1250
OKFUSKEE COUNTY—		
Prairie et al, Davis 1, nw c 9-13-10e	145	3397
Champlin Refining Co., Washington 9, ne nw se 15-11-11e	120	3523
Prairie et al, Andrews 1, se c 5-13-10e	*	3418
OKFUSKEE COUNTY—		
T. P. McAdams, Pincham 4, cel se nw 1-10-11e	*	2000
OKLAHOMA COUNTY—		
Sinclair O&G, Vencl 11, sw c se 31-11-2w	25,885	6649

Tabulation and Comparison on page 56

Company, Well and Location	Initial Production Bbls.	Depth
Sinclair, School 14, sw c ne 36-11-3w	18,825	6626
I. T. I. O., Emerson-Joyce 2, nw ne ne 25-11-3w	¶10	6941
Coline Oil Co., Clauer 10, nw sw se 25-11-3w	4546	6684
I. T. I. O., A. Brokaw 3, sw ne ne 13-11-3w	2855	6360
L. Trosper 2, sw c nw 12-11-3w	¶50-601	6475
Mid-Texas Oil Co., Community 1, cnl se ne sw 1-11-3w	19,300	6400
OKMULGEE COUNTY—		
J. E. Wallace, Colbert 3, c nw nw 14-14-14e	25	1793
OSAGE COUNTY—		
Okla. Nat. Gas Co., 1793, se c nw nw se 30-21-11e	¶½	1638
I. T. I. O., 431, nw c se se sw 3-23-8e	¶1¼	1101
434, sw c 22-27-11e	¶1¼	1867
Winona Oil Co., 15, ne c nw ne ne 20-29-9e	25	1576
Galt-Brown 7, cel nw 7-24-8e	*	2592
Carter Oil Co., 3, ne se ne 32-25-9e	*	2429
PAWNEE COUNTY—		
Mooney et al, Killock 1, se sw ne 20-20-10e	*	1956
PONTOTOC COUNTY—		
Dixie Oil Co., Roper 2, sw se nw 32-5-5e	120	2507
Benedum and Trees, Staritt 1, sw se sw 28-5-5e	90	2404
POTTAWATOMIE COUNTY—		
Wilcox O&G, Warren 2, sw nw sw 23-6-3e	841	3514
Twin State Oil Co., Archer 2, se ne se 22-6-3e	1080	3517
J. A. Hull Oil Co., Townsend 1, ne se se 22-6-3e	886	3505
Superior Oil Co. et al, Alford 1, ne se ne 7-9-5e	550	4315
SEMINOLE COUNTY—		
Prairie, Ground 3, nw sw ne 23-9-5e	825	4287
Hilton A. Phillips et al, Burgess 3, ne nw ne 29-6-6e	3535	2979
Chupco 2, sw nw se 20-6-6e	1902	2948
Empire O&R, Fish 2, se sw ne 19-7-8e	¶22	2907
Mid-Continent Pet. Corp., Smith 19, ne sw ne 5-7-7e	635	3346
Continental Oil Co., Harris 9, nw c sw 4-7-7e	1037	3203
Mid-Continent Pet. Corp., Aleck 4, sw ne se 23-7-6e	30	3182
Barnsdall, Factor 2, ne nw se 13-7-6e	535	3972
SEMINOLE COUNTY—		
Carter Oil Co., Campbell 4, ne nw sw 20-9-6e	270	4258
Gypsy, Miller 1, ne sw se 24-9-5e	400	4230
Magnolia, Beavers 1, ne nw sw 29-6-6e	*	4215
Gypsy, Louisiana 1, nw sw se 16-6-6e	*	3787
Carter et al, Cheparney 1, se c 30-10-6e	*	4231
STEPHENS COUNTY—		
John Fossett, Adams 4, ne c nw sw 19-1s-8w	¶9	1172
Simms Pet. Co., Duncan 1, cnl ne ne 28-2s-7w	*	1735
George Pace et al, Wilson 3, sw c nw nw 20-2s-7w	*	1868
Wilson 2, ne c sw nw ne 20-2s-7w	*	1400
Sykes et al, Wade 1, se c 8-1s-8w	*	3224
WAGONER COUNTY—		
Bryan Pet. Co., Jackson 1, se c ne 33-17-16e	¶7	876
J. E. Martin, Drew 1, nw c sw se 26-18-15e	*	1034

KANSAS

Company, Well and Location	Initial Production Bbls.	Depth
BARBER COUNTY—		
Barbara Oil Co., Alexander 1 "B", ne sw sw 7-33-12w	*	5112
BUTLER COUNTY—		
P W Y Oil Co., Rutherford 2, cel se nw 24-27-4e	20	2022
Empire O&R, Crawley 1, nw c sw 11-28-5e	*	3260
COFFEY COUNTY—		
Selby and Nolan, Eppinger 1, nw ne nw 23-22-13e	*	1906
GREENWOOD COUNTY—		
Theta Oil Co., Fankhouser 9, nw c sw 23-22-12e	20	1702
McPHERSON COUNTY—		
Derby Oil Co., Stucky 5, sw nw se 9-21-3w	475	3424
Independent O&G, Morehouse 2, nw c 3-21-3w	650	3448
Gypsy Oil Co., Stucky 2, ne sw se 33-20-3w	340	3288
Stucky 1, sw c se 33-20-3w	*	3715
SUMNER COUNTY—		
Gypsy Oil Co., Enderud 2, nw c sw 16-35-3w	1550	4772

EASTERN STATES

PENNSYLVANIA

BRADFORD FIELD—		
South Penn Oil Co., Bingham 400 tr 3	3	....
Bingham 408 tr 3	5	....
Enterprise 2	2	....
Burdick 83	3	....
Hamlin 101	3	....
N. W. & E Co 66	3	....
N. W. & E Co 67	4	....
Melvin 287	2	....
Melvin 288	2	....
Jones 281	3	....
Hazlewood Oil Co., Block 1 tr 21	2	....
Bingham 57	3	....
Forest Pet. Corp., Fee (7 wells)	14	....
Hawkins Oil Corp. Fee (1 well)	2	....
G. L. Wann & Co., Bingham 388 tr 58	2	....
John Jackson, Franchot 9	7	....
Bradford Producing Co., Franchot 1	17	....
M. C. Reidy, Reidy 91	4	...
E. A. Booth, Bovaird 4	7	....
Kinley Oil Co., Schanfield 23	3	....
R. A. Delo & Co., Franchot 1	3	....
Brink & Brink, Bingham 468 tr 7	3	....
E. M. Park Estate, Fee 11	7	....
Margaret Colt, Kendall 1	2	....
T. P. Thompson Jr., Borden 23	4	....
J. W. Looker, Willetts 5	4	....
Phoenix Oil Co., Niagara 1	5	....
N. D. Gibson & Co., Gibson 3	2	....
Kate Schoonover, Schoonover 1	2	....
D. T. Andrus & Co., Bingham 321 tr 1	3	....
D. W. Daly, Bingham 389 tr 72	2	....
G. C. Rice & Co., Weston 1	2	....
J. W. Kaufmann, Rasey 7	3	....
J. F. Mayer, Bingham 7	2	....
BUTLER COUNTY		
First Nat. Bank of Parker, Gibson 4	3	....
Dufford & Elliott, Ziegler 1	2	....
T. P. Bell, Bell 7	2	....
Marshill, Love & Co., Love 1	*	....
CLARION-VENANGO COUNTIES		
W. F. Reighner, Shoup 4	5	....
George A. Long & Co., Mills 23	7	....
Allen Oil Co., Jones 1	*	....
F. C. Deemer, Meherton 28	2	....
T. P. Swartzfager & Co., Black 1	¶¼	....
American Gas Co., Shriver 1	*	....
H. C. Foster, Foster 61	2	....
Alum Rock Gas Co., Hasson 6	2	....

NEW YORK

ALLEGANY COUNTY—		
J. A. Bucher, Bucher 18	3	....
Hazlewood Oil Co., Brown 2	2	....
J. M. McDivitt & Co., McDivitt 19	2	....
Bayard C. Fuller, Fuller 4	2	....
First Nat. Bank of Olean, Birticil 2	2	....
A. H. Ashwood, Ashwood 2	2	....
Frank Homer, Homer 3	2	....

WEST VIRGINIA

Company, Well and Location	Initial Production Bbls.	Depth
CALHOUN COUNTY—		
Ira Haught & Co., Elder 1	.1	....
CLAY COUNTY—		
Virginian Gasoline & Oil Co., Brown-Swan 1	50	....
South Penn Oil Co., N. G. & R. Parker 9	10	....

KENTUCKY

WARREN COUNTY—		
P. M. Perkins, Perkins 1	5	586
CLAY COUNTY—		
Petroleum Exploration Co., Rawlings 1	*	....
McLEAN COUNTY—		
Miller & Damron, Cox Hrs. 2	65	....
MUHLENBERG COUNTY—		
Ellis, Young & Co., Allen 1	*	3400
WEBSTER COUNTY—		
H. C. Wilson & Co., Feast 1	¶¼	....
HENDERSON COUNTY—		
Niagara Oil & Gas Co., Slavey 1	¶¾	....
Henderson Oil Synd., Nunn 2	¶½	....
P. E. Tichenour, Watson 1	*	....
DAVIESS COUNTY—		
Dr. Sirman & Co., Cossler 1	75	....
Hupp, Duff & Co., Hayden No. 2 tr 3	40	....
Hupp & French, Ware 4	40	....
Ben T. Wright & Co., Ambrose 4	25	....
Eastern Gulf Oil Co., Tyler 5	25	....
Cumberland Petroleum Co., Baird 2	*	....
Mackey 5	*	....
OHIO COUNTY—		
Cumberland Petroleum Co., Skillman 1	80	....
Skillman 2	60	....
Massie 1	30	....
Hamilton 9	80	....
Moseley 1	80	....
Moseley 2	80	....
Hamilton 8	80	....
Chester Oil Co., Medcalf 9	20	....
Medcalf 10	20	....
Patton 1	80	....
Patton 2	80	....
Patton 3	120	....
James C. Ellis & Co., Crow-Connor 2	¶¾	....
Lloyd 1	¶¾	....
Morgan 2	*	....
Penn-Indiana Oil Co., Kelley 18	85	....
S. R. Nigh & Co., Kelley 14	58	....
Leeper Oil Co., Blackerby 2	35	....
Brown & Co., Hickey 4	10	....
C. M. Root, Lake 3	20	....
H. C. Smith Co., Finley 2	¶½	800
Wood Oil Co., Bowman 2	*	780
The Ohio Oil Co., Richards 1	*	585
Rex-Pyramid Oil Co., Westerfield Hrs. 1	*	....
Rhodes 7	*	....
L. C. Young Wade 1	*	....

SOUTHEASTERN OHIO

WASHINGTON COUNTY—		
Mallory & Co., Zumbro 1	*	1696
MONROE COUNTY—		
Neib Farm Oil Co., Bowers 4	*	1144
NOBLE COUNTY—		
Way Wickens & Co., Hupp 8	*	315

CENTRAL OHIO

PERRY COUNTY—		
Ohio Fuel Gas Co., Wilson 1	¶¼	3582
Porter 2	¶½	3611
Ney & Co., Wilson 2	10	3567
Hubb Oil & Gas Co., Hull 2	*	981
MUSKINGUM COUNTY—		
H. C. Farmer & Co., Shurtz 1	¶1	4041
Wittmer Properties Trus., Baker 2	4	3038
The Atha Co., Werner 1	*	3872
LICKING COUNTY—		
F. M. Rugg Trus. Willie 1	160	....
Wittmer Properties Trus. Mossholder 4	¶¼	832
TUSCARAWAS COUNTY—		
Hopewell Oil & Gas Co., Asher 1	100	3642
Blackstone & Co., Boltz 1	*	3488
ATHENS COUNTY—		
Ohio Fuel Gas Co., Joy 1	¶¼	1583
Fleming 1	¶¼	1320
Wittmer Properties, Trustee, Hocking Fire Clay 1	¶¾	....
HOCKING COUNTY—		
The Pure Oil Co., Harsh 1	73	....
Ohio Fuel Gas Co., Calvert 1	¶½	2355
MEDINA COUNTY—		
Oko Oil & Gas Co., Watson-Sanford 37	10	....
M. & S. Burton, Vandemarke 1	*	....
COSHOCTON COUNTY—		
Ohio Fuel Gas Co., Scott 1	¶¼	3032
McClay Bros., Ashcraft Hrs. 1	¶3	2911
GUERNSEY COUNTY—		
Ohio Fuel Gas Co., Hallett 1	¶¼-5	1385
VINTON COUNTY—		
H. C. Farmer & Co., Clark 2	2	....
WAYNE COUNTY—		
Ohio Fuel Gas Co., Begley 1	¶½	....
SUMMITT COUNTY—		
F. A. Brendall & Co., Smith 3	¶1	3939
FAIRFIELD COUNTY—		
Ohio Fuel Gas Co., Eyman 1	¶¼	810
HOLMES COUNTY—		
Ohio Fuel Gas Co., Mellor 1	*	....

NORTHWESTERN OHIO

HANCOCK COUNTY—		
R. W. Kirk & Co., James 2	100	1503
Mathias Bros., Hart 14	25	1542
SENECA COUNTY—		
J. H. Murphy & Sons, Crum 2	¶¼	520
McPerron-Fossun Oil Co., Ewalt 1	*	1550
Kansas-Ohio Oil & Gas Co., Harrison 1	5	1330
ALLEN COUNTY—		
Roalman & Peak, Leedy 3	50	1365

INDIANA

PERRY COUNTY—		
The Ohio Oil Co., Epple 1	*	900
Conyers, Roetzel & Co., Cassidy 1	¶½	500
GIBSON COUNTY—		
Indiana Southwestern Utility Corp., McCullough 2	60	....
HARRISON COUNTY—		
Eureka-Indiana Oil & Gas Corp., Farnsley 1	¶1	200
FLOYD COUNTY—		
Wood Oil Co., Unknown 1	*	....
CRAWFORD COUNTY—		
Louisville Cement Co., Byrum 1	*	1237
MONROE COUNTY—		
Petroleum Exploration Co., Kinser 1	*	....
MORGAN COUNTY—		
Petroleum Exploration Co., Langford 1	*	....
Ratts 1	*	....

ILLINOIS

LAWRENCE COUNTY—		
Shiloh Oil Co., Clark-Morehead 1	10	1396
CRAWFORD COUNTY—		
Porterville Oil Co., Fought 1	1	1000
Watson & Co., Newlin 2	10	875

MICHIGAN

ISABELLA COUNTY—		
E. Brown Oil Co., Grubb 2	450	3569
The Pure Oil Co., Rayner C-2	300	3560
Rayner C-3	300	3575

NORTH LOUISIANA

BOSSIER PARISH—		
Ark. Fuel Oil Co., Bain 1, 31-23-11	*	3208
Barnett B-4, 36-23-12	187	3153
Ramsey 1, 31-23-11	4	3171
Texas Co., J. W. Peyton 1, 30-23-11	50	3167
Jones Chemical Co., Fee 4, 30-16-11	*	2572
CADDO PARISH—		
P. T. Mize, La. O. R. Corp. A-2, 6-20-15	15	1563
OUACHITA PARISH—		
Ark. La. Pipe Line Co., McEnery 4, 29-19-4e	¶43¼	2200
RICHLAND PARISH—		
Southern Carbon Co., J. A. Hemler 1, 1-16-6e	¶40	2440

SOUTH LOUISIANA

EAST HACKBERRY—		
Gulf, Erwin 1	*	3415
HACKBERRY—		
Yount-Lee, Lacey Fee 4	20	3392
ST. LANDRY PARISH—		
Gulf, Hoskins 3-A	1000	3345
LOCKPORT—		
Vacuum-Gulf, Miller 26	1000	4380
VINTON—		
Vinton Pet. Co., Matilda Gray 7	3600	2900
WAX LAKE—		
Pure, Wax Lake State 2, Sec. 11-17s-9e, St. Mary Parish	*	5900
EVANGELINE—		
Abshire Bolyard Oil Co., Syndicate Fee 6	40	1650

TEXAS

TEXAS GULF COAST

Company, Well and Location	Initial Production Bbls.	Depth
BARBERS HILL—		
Mills Bennett, Fisher-Higgins 2	2000	4770
Humphreys Corp., Kirby H-3, wo	15	6182
Sinclair, Wilburn 7	300	5200
Yount-Lee, Chambers Co. Ag. Assn. 14	660	4465
Richardson 5, salt	*	5002
BLUE RIDGE—		
Navarro Oil Co., Robinson A-9, salt	*	5240
Joe Collins, R. C. Duff 1, heaving shale	*	4690
BATSON—		
Paraffine Oil Co., Brock & Dies 1, cap rock	*	1460
CEDAR BAYOU—		
Sloane Prospecting Co., Davis 1, Hannah Nash sur, Harris Co.	*	6405
CLAY CREEK—		
Sun Oil Co., Wm. Janner 3, pumping	10	1426
ESPERSON—		
Republic Prod. Co., Moores Bluff 1, GC&SF RR Sur, 37, Liberty Co.	*	5100
HULL—		
Republic Prod. Co., Dolbear 44, dd	2000	2720
HUMBLE—		
Rio Bravo Oil Co., Fee 2	500	3987
Cullen & West, Lee 4	385	4802
PETTUS—		
Barnsdall Oil Corp., Leroy Roberts 1	345	3655
Wm. F. Morgan & Tidal, Pereira 1, V. Ramos Sur., Goliad County	*	6004
PIERCE JUNCTION—		
Moody Corp., Boyles 2	1100	3870
REFUGIO—		
Independent O&G Co., J. F. B. Heard 2-C	50	3690
J. F. B. Heard 1-B	200	3655
Larcro Gas & Pet. Co., Strauch 5	50	3658
Mission Drlg. Co. of Texas, Holmes Heard 1	450	3700
Sun Oil Co., Buckley 5	50	3704
Dixon et al, Jurica 1, wildcat near Woodsboro	*	3951
SPINDLE TOP—		
Yount-Lee, McFadden 132, salt water	*	2900
WHEELWRIGHT SURVEY (Matagorda County)—		
Watts Oil Co., Titus 1	*	3505

SOUTH TEXAS

MEDINA COUNTY—		
Sunflower Oil Co. Corp., Mofield 1	5	964
WEBB COUNTY—		
Claggett and Evans, Webster 1	150	3000
French Oil Co., R. Benavides 1-B	75	2357
Sun Oil Co., Yeager-Stroman 14	25	2175
Magnolia, Benavides 3-A	40	2347
ZAPATA COUNTY—		
Allied Gas Co., Trevino 6-A	400	1246
Trevino 5-A	150	1249
Trevino 3-A	125	1250
Blankenship et al, Montemayor 1	75	1291
Edgington and Niles, Trevino 4	1000	1230
O. W. Killam, Cuellar 124	100	1545
Nordan and Morris, Bustamente 1	100	1232
W. R. Shankel, Guiterrez 2	150	1259
SRC CORP., Cuellar 4-B	125	1231
Trevino 2-A	75	1224
Cuellar 2-B	150	1234
Cuellar 3-B	125	1246

TEXAS PANHANDLE

CARSON COUNTY—		
Empire Gas & Fuel Co., Whittemore 1	¶1	3434
GRAY COUNTY—		
Danciger O&R Co.-Champlin Ref. Co., Cook-Faulkner 7	100	2941
J. H. Lenix et al, C. W. Bradford 1	¶6½	2475
Prairie O&G Co., Worley-Leycomb 5	250	2915
The Texas Co., Coombs-Worley 9	250	2930
J. E. Wright 6	¶2½-50	2890
Vulcan O&G Co., J. M. Carpenter 1	¶3½-5	2810
Wilcox O&G Co., Coombs-Worley 17	135	2830
WHEELER COUNTY—		
H. R. Anderson et al, G. R. Reneau 1	¶30	1943
Lone Star Gas Co., W. L. Cooper 1	¶10	1615
Murchison-Fain-McGaha, I. Close 18	¶37	1675

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Company, Well and Location	Initial Production Bbls.	Depth
PANOLA COUNTY—		
Texas Co., G. W. Brumble 9, Jno. Womack sur.	¶½	2350

NORTH TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
ARCHER COUNTY—		
Bridwell Oil Co., Turbeville 1	*	1163
Burns et al, Fee 1	*	1603
Campbell Oil Corp., Carr 1	*	1345
Golding-Cochran, Brown 8	30	1179
Lambert et al, Ferguson 1	*	1804
Massie et al, Echols 3	40	1146
Maxon et al, Green 6-B	25	1122
Perkins & Cullum, Mangold 2	*	1826
BAYLOR COUNTY—		
Grisham-Barnsdall Oil Co., Portwood-Harry 5	40	1400
W. W. Silk et al, Portwood 1-B	*	1573
MONTAGUE COUNTY—		
Bridwell & Continental Oil Co., Brown 3	*	1956
WICHITA COUNTY—		
Arkansas Fuel Oil Co., K&K 36-A	110	1508
Clark et al, Bickley 4	90	849
Hammond et al, Ferguson 3	*	1852
T. F. Hunter et al, Waggoner Bros. 14-C	50	1870
WILBARGER COUNTY—		
Baldwin et al, Haynes 1,	*	2509
Barkley & Meadows, Waggoner 13-C	75	1887
Empire Gas & Fuel Co., Waggoner 25-A	115	2292
Fain-McGaha Oil Corp., Waggoner 1-H	*	2456
McCarty Oil Co., Waggoner 2	60	1835
Phillips Pet. Co., Waggoner 1-W	405	2304
Waggoner 1-LL	35	2344
Prairie O&G Co., Waggoner 10-B	20	2375
Rancho Oil Co., Waggoner 10-A	*	2501
Shanor et al, Hall 1	*	2702
Simms Oil Co., Ayers 2	*	2010
Venmex Oil Co., Waggoner 1-F	220	2449
Waggoner Ref. Co., Waggoner 15-J	90	2423
Waggoner 1-Q	*	2065
Zenith Oil Co., George 4	45	2196
YOUNG COUNTY—		
Alexander & Snoddy, Wilborn 1	*	1451
Brazelton et al, Larimore 6	400	712
Consolidated Oil Co., Winkler 1	*	1120
Davis & Quinn, Rochelle 1	*	1027
Greene Prod. Co. et al, Morgan 1	250	3856
Hynes et al, Deitrich 1	*	1300
Independent O&G Co., Larimore 5	700	710
Larimore 11	*	735
Larimore 14	300	714
King Royalty Co. & Heydrick, Daniel 7	40	890
Kleiner-Riggs-Tidwell, Bullock 1	*	714
Lyles-Kimbell-Mitchell, Brown 1	*	768
Mollenkoph et al, Larimore 3	*	732
Mudge Oil Co., Daws 1	*	1255
Nash-Windfohr et al, Ware 2-B	*	4755
Pierce et al, Baze 1	*	980
Remington et al, Logan 1	*	680
Reno Oil Co., Meadors 1	*	1051
E. R. Riggs et al, Larimore 14	650	717
Larimore 15	320	717
Riner & Omohundro, Ruchig 1	*	965
Simpson et al, Larimore 3	300	713
Wainwright et al, Fee 1	*	1001
West et al, Larimore 3	320	711
Wootten & Reed, Brayer 2	*	670
Young Bros. & Terrell, Larimore 2	*	700

CENTRAL WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
BROWN COUNTY—		
McCarter et al, Favor 2	*	1128
Walker & Leiner, Rutherford 1	*	1200
CALLAHAN COUNTY—		
Ellis & Dumas, Irwin 1	*	1722
COLEMAN COUNTY—		
Barney Carter et al, Kingsbury 2	4	1467
Levi Smith et al, Switzer 3	100	1435
Tidal Oil Co., Stewardson 6	3	1454
COMANCHE COUNTY—		
Grovette Oil Corp., Poteet 3	¶1	2783
Sun Oil Co., Unit Plan, Wilhelm 1	*	3303
EASTLAND COUNTY—		
Cranfill-Reynolds, Inc., Coop 1	*	1390
Lone Star Gas Co., Grove 6	¶35	3558
Lucas, Isett & Painter, Vestal 1	*	3110
Michel et al, Hughes 1	*	1353
ERATH COUNTY—		
Texas Pacific Coal & Oil Co., G. M. Allen 6	¶1¼	437
G. M. Allen 7	*	427
SHACKELFORD COUNTY—		
Big States Oil Co., Russ-Webb 17	¶5	1051
F. W. Holder et al, Compton 1	*	905
Wilson Drlg. Co., Morris-Buie 1	*	1600
STEPHENS COUNTY—		
G. Cooze et al, Douglas-Brown 1	35	3225
Universal Oil Co., Corbett 1	*	4501

WEST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
CRANE COUNTY—		
Gulf Prod. Co., J. T. McElroy 77	80	3014
J. T. McElroy 78	180	2957
Simms Oil Co.-Atlantic, University 2-E	300	3124
FISHER COUNTY—		
Cranfill-Reynolds Co., Cooper 1	*	462
GLASSCOCK COUNTY—		
California Co., J. W. Baker 2	900	2320
F-H-E Oil Co., Roberts 3-C	25	1843
Kirby Pet. Co. et al, Phillips 6	1535	2301
HOWARD COUNTY—		
Ward Oil Co., Roberts 19	95	1390
ECTOR COUNTY—		
Humble-Penn-Atlantic, York 9	340	3710
IRION COUNTY—		
Carl G. Cromwell, J. M. Nutt 3	70	1456
PECOS COUNTY—		
California Co., Yates 22, Lse. 1, Sec. 34	8400	1427
Continental Oil Co., University 7-A	150	1010
G. A. Henshaw, Jr., Inc., University 1	*	515
REAGAN COUNTY—		
Big Lake Oil Co., University 1-C	¶11½-973	8668
UPTON COUNTY—		
Eppenauer Drlg. Co., W. A. Chaney 2	*	2263

CENTRAL EAST TEXAS

Company, Well and Location	Initial Production Bbls.	Depth
VAN ZANDT COUNTY—		
Pure Oil Co., D. R. Howell 2	7500	2943
J. A. Bracken 2	3500	2953
R. E. Collett 1, (97-ac lse.)	2000	2934
J. J. Murphree 2	3500	2948
R. L. Wells 7	3000	2939
Shell Pet. Corp., B. M. Fowler 1, (22½-ac lse.)	6000	2957

NEW MEXICO

Company, Well and Location	Initial Production Bbls.	Depth
LEA COUNTY—		
Geo. F. Getty Oil Co., H. D. McKinley 2	¶12-20,000	4202
Ohio Oil Co., State 1, (Sec. 30)	¶8-10,100	4205

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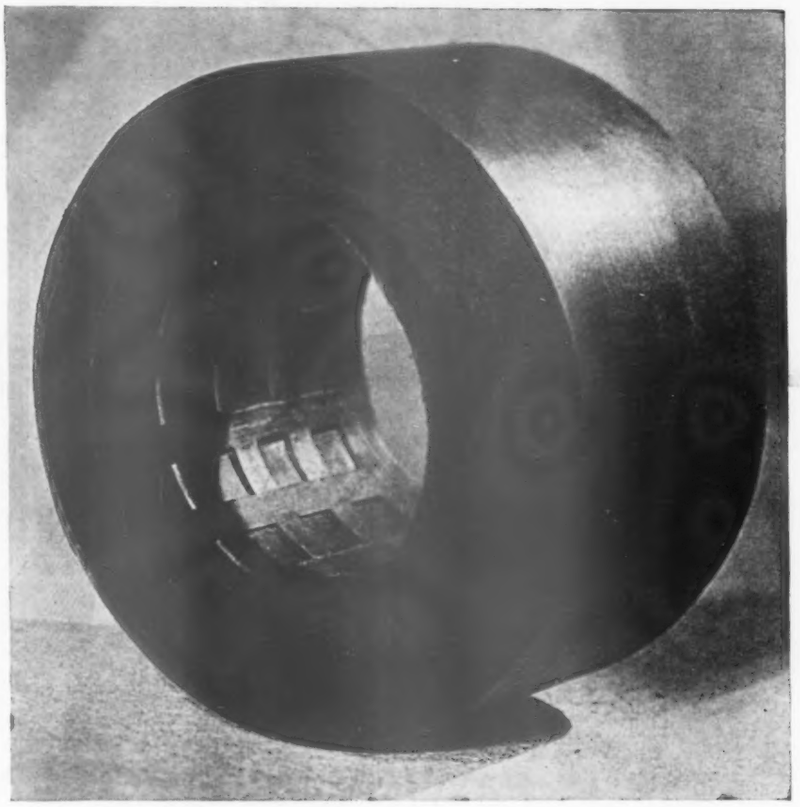

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PERMITS GRANTED FOR NEW WELLS

CALIFORNIA

KERN COUNTY—Petroleum Securities Co.'s Johnson-Moss 1, 14-29-29.

LONG BEACH—Robert Bowles Oil Co. No. 5, 29-4-12.

MIDWAY—Standard Oil Co. No. 46, 1-32-23. Federal Drilling Co., No. 6, 20-31-24.

MT. POSO—General Pet. Corp.'s Heisen 32, 16-27-28.

PLAYA DEL REY—Burket and Braum, No. 1, 21-2-15. Venice Oil Syn. No. 2, 21-2-15; No. 3, 21-2-15. Mohawk Pet. Co., No. 1, 28-2-151; No. I-1, 28-2-15; No. O-1, 28-2-15. Seashore Pet. Corp., Ltd., and Deuel Pet. Corp., Ltd., No. 1, 21-2-15. Lang and Wall, No. 1, 21-2-15. Imperial Gypsum and Oil Corp., Del Rey 1, 21-2-15. Joseph M. Devere, Grafton 1, 21-2-15. Clyde H. Nelson, No. 1, 21-2-15. A. T. Jergins Trust, Capp 1, 21-2-15.

POTRERO—Star Pet. Co., Potrero 1, 28-2-14.

KANSAS

CHAUTAUQUA COUNTY—Griffin & Bell, Oliver 8, csl se sw 1-32-10e.

COWLEY COUNTY—Mission Oil Co., Semens 1, c se se 17-31-6e.

McPHERSON COUNTY—Tom Palmer et al, Winn 1, nw sw nw 7-20-1w.

RICE COUNTY—United Pet. Corp., Wellman 1, ne c 29-21-9w.

SEDGWICK COUNTY — Shell Pet. Corp., Lygrisse 3 "A", sw c ne 15-26-2e; Morris 1, (owdd) se c 10-26-2e.

OKLAHOMA

CADDO COUNTY—Magnolia Pet. Co., Heldund 5, nw c ne, 11-5n-9w.

CARTER COUNTY—Clark and Cowden and Venmex Oil Co., Miller 1, sw c 29-1s-2w. Wirt Franklin Pet. Corp., Mitchell 1, nw c se, 24-1s-3w. Texas Co., Eaves 3, ne se sw 24-1s-3w. Magnolia, Spigner 3, ne c nw 24-1s-3w. Magnolia, Spignor 2, se ne nw, 24-1s-3w. J. H. Hudson, Brooks 1, sw se se, 13-1s-3w.

COAL COUNTY—Blackwell O&G, Gumm 1a, sw ne nw 26-3n-9e.

CREEK COUNTY — C. G. Tibbens O&G, Sneed 3, sw ne nw 18-14-9e; Bartleit 2, ne c sw nw 18-14-9e; Baker 3, se c nw nw 18-14-9e. Hensley et al, Sneed 1a, sw c se nw 26-15-12e. Bryan Pet. Co., 1, sw nw sw 3-17-10e. Gilcrease Oil Co., Brights 1, se c 26-17-9e. Shell Pet. Corp., Bruce 8, se c sw ne 10-17-9e. Elinor O&G et al, Proctor 1, sw c 2-17-9e. Tim Cushing et al, Self 1, nw c se nw 12-17-8e. R. B M Oil Co., Willoughby 1, se c nw sw 26-18-9e.

GARFIELD COUNTY—Champlin Refining Co., Kindt 1a, nw ne ne 26-23-4w.

GRANT COUNTY—Bu-Vi-Bar Pet. Co. et al, Hurst 1, c sw 25-26-5w.

HUGHES COUNTY — C. B. Bunte et al, Westmoreland 1, c ne sw 11-7-8e. Inglehart et al, Williams 1, c se sw, 28-9-10e.

KAY COUNTY—McFarland, Simonds 8, c s½ nw, 11-27-3e.

MARSHALL COUNTY — Otto Reynolds, Davis-Sullivan 3, sw c nw se nw 30-5s-6e. Bilbo Oil Corp., Davis-Sullivan 5, ne c sw nw 30-5s 6e; Taliaferro 14, ne c nw se se 14-5s-5e. Otto Reynolds, Iliff 1, nw c se, 26-5s-5e.

MUSKOGEE COUNTY — Beland Oil Co., James 9, csl ne se 18-14-17e. Western Devel. & Elec. Co., Spaulding 2, se c sw nw ne, 9-15-18e; Ingram 1, nw c ne se 9-15-18e. D. L. T. Co. et al, Mackey 5, se c sw ne sw 9-15-18e. Barnes et al, McIntosh 1, sw c 3-15-18e. H. L. Jolly, Howard 1a, ne c sw se 19-15-16e. P. Boyle et al, Howard 1a, se c nw se 19-15-16e.

OKFUSKEE COUNTY — T. P. McAdams, Pincham 5, c se nw 1-10-11e.

OKLAHOMA COUNTY—J. E. Mabee et al, Schilling 1, se ne sw 10-11-3w. I. T. I. O., Ivanhoe Addition 1, nw ne ne 15-11-3w. Julian Oil Royalty Co., 1, ne c nw 14-11-3w. Cromwell-Franklin Oil Co., Trosper Park 37, ne nw se 12-11-3w; Trosper Park 36, sw nw se 12-11-3w; Trosper Park 35, se ne sw, 12-11-3w. T. B. Slick, Campbell 3, se ne ne 3-11-3w; Campbell 2, ne se ne 3-11-3w. Slick and Atkinson, Clegg 2, ne nw sw 2-11-3w; Rodman 1, sw nw sw 2-11-3w; Key 2, nw se sw 2-11-3w. T. B. Slick, Calssen 4, se nw nw 2-11-3w. Phillips Pet. Co., Ciger 1, se sw nw 2-11-3w; Penn 1, sw nw nw 2-11-3w; Bay 1, sw nw nw 2-11-3w; Unruh 1, se c nw sw nw 2-11-3w. Anderson-Prichard, Gibbons 5, ne c sw ne 2-11-3w; Gibbons 4, cel se ne 2-11-3w. Cunard Oil Co., Armourdale 1, sw nw nw 2-11-3w. Wirt Franklin, Page-Tucker 1, sw c se 35-12-3w.

OKMULGEE COUNTY—Rossiter Oil Co., Burgess 4, cwl ne nw 20-12-13w. W. B. Pine, Bradford 1, (owdd) cnl se ne 1-12-13w.

OSAGE COUNTY—Devonian Oil Co., 1, ne c nw ne 33-22-11e; Galt-Brown 3, sw ne ne 15-24-8e (owdd). Link Oil Co. 7, (owdd) ne sw sw 34-25-9e. Empire O&R 3, nw sw sw 23-27-11e. Winona Oil Co., 16, cel ne 20-29-9e.

PAWNEE COUNTY — Wasson et al, Wrightsman 1a, ne c 8-20-8e. Pawnee Oil & Prod. Co., Fee 1a, se sw se 23-20-7e.

PAYNE COUNTY—Deep Rock Oil Corp., Harris 1, se sw nw 9-18-5e.

PITTSBURG COUNTY—Choctaw Gas Co., School 1, se c 9-7-18e. Midwestern O&G, Dyer 1, c s½ se sw 4-7-18e.

PONTOTOC COUNTY—Dixie Oil Co., Allen 1, nw se ne 32-5-5e.

POTTAWATOMIE COUNTY—Deep Rock Oil Corp., Marshall 1, sw c 30-6-4e. I. T. I. O., Gregg 1, nw se sw, 23-6-3e. Wilcox O&G, Warren 4, se nw sw 23-6-3e. Gypsy Oil Co., Archer 2, ne sw sw 23-6-3e. Atlantic Prod. Co., Thomas 1, ne c nw 9-7-4e.

SEMINOLE COUNTY—Sinclair O&G, Cully 3 "A", se nw nw 13-5-7e. Hilton A. Phillips et al, Burgess 4, sw nw ne 29-6-6e. Carter et al, Community-Amerada 2, sw c se 11-9-6e.

STEPHENS COUNTY — Pandem Oil Co., Burkleo 1, nw c sw nw nw 4-2s-8w.

WAGONER COUNTY—Peterson and Young, Helden 1, nw c se sw 13-16-15e. Bryan Pet. Co., Jackson 2, nw c sw 34-17-16e. Price et al, Verner 1a, ne c 16-17-16e.

TEXAS

ARCHER COUNTY—G. B. Ray, Wichita Falls, F. C. Green, 160, 1, J. Levins sur, 150 ft from n and w lines. C. S. Starr, Wichita Falls, W. R. Pace, 160, 1, B 112, J. W. Harris sur, 150 ft from s and e lines. E. J. Stump, Wichita Falls, T. B. Wilson, 65, 1, S. P. Ellis sur, 450 ft from s and w lines of sec. H. P. Key, Olney, R. T. Coffelt, 80, 1, B 89, W. M. Baker sur, 730 ft from n and 150 ft from w line. Golding & Cochran, Wichita Falls, H. E. Brown, 163, 7, B 2, BBB&C sur, 400 ft nw of No. 6. Flake & Harmon, Archer City, J. A. Bell, 213, 1, B 5, C&P sur, 150 ft from s and 1080 ft from w li lot 13. L. T. Burns et al, Wichita Falls, M. Dugan, 200, 1, Club Ranch sur, 1470 ft from n and 750 ft from e li Blk. 2. H. P. Harmel, 20, A1, 2491 TE&L sur, 150 ft from n and w lines. Bridwell Oil Co., Wichita Falls, J. H. Turbeville, 120, 1, JCSL sur, 150 ft from s and 750 ft from e li Blk. 25. Burr Lambert, Wichita Falls, W. P. Ferguson, 130, 1, S 122, SP Ry sur, 150 ft from n and w lines. Russell & Wilson, Wichita Falls, H. O. Prideaux, 55, 15, A. Rohus sur, 75 ft from n and e lines. A. P. Nicholson, Wichita Falls, Hudson, 80, 1, J. Saunders sur, 750 ft from n and 150 ft from w line. J. C. Stinnett, 50, 1, B 19, W. L. Herring sur, 750 ft from n and 600 ft from w line. W. E. Maxon, Jr., et al, Wichita Falls, F. C. Greene, B 320, 6, J. Levins sur, 150 ft from n and 1456 ft from w line. Perkins & Cullum, Wichita Falls, H. C. Hanszen, 175, 2, B 14, FCSL sur, 150 ft from n and w lines. Golding & Cochran, Wichita Falls, H. E. Brown, 163, 8, B 2, BBB&C sur, 400 ft n of No. 7. J. A. Love, 40, 1, S 2, SP Ry. sur, 150 ft from n and 450 ft from w line. Continental Oil Co. & Cullum, Wichita Falls, FCSL, 100, 8, FCSL sur, 200 ft from n and e lines of Blk. 9. Fresno Oil Co., Wichita Falls, H. O. Prideaux, 140, 29, J. Dorsey sur, 160 ft from n and 150 ft from e line. J. B. Blake, Jr., Wichita Falls, Turbeville, 228, 1B, Club Ranch sur, 1170 ft from n and 150 ft from e li Blk. 21. Shappell Oil Co., Wichita Falls, Kemp-Kempner E, 83, 2, WVFL sur, 458 ft from n and 150 ft from w li Blk. 76. C. C. Julian O&R Co., Oklahoma City, H. C. Riggs, 120, 1, S 2, SP Ry. sur, 1320 ft from n and 150 ft from w line.

ANDERSON COUNTY—Humble O&R Co., Corsicana, J. H. Gouger, 22, 3, Jno. Trimmer sur, 150 ft from n and e lines.

BEE COUNTY — Grayburg Oil Co., San Antonio, S. Copeland, 160, 1, W. M. Sanford sur, 150 ft from s and e lines. Arkansas Fuel Oil Co., Shreveport, J. Kimball 80, 1, S. Winship sur, 200 ft from s and w lines. Hicks & Young, San Antonio, A .C. Billingsley, 30, 1, B. Q. Hadley sur, 155 ft from s and w lines. Texas Co., Houston, J. R. Scott, 3, J. M. Uranga sur, 7100 ft sw of No. 1. T. B. Slick, Oklahoma City, B. Hodges, 2, 1, Pettus-Kerr sur, center of Blk. 19.

BASTROP COUNTY — Pacific O&G Co., Austin, J. M. Litton, 1, 150 ft from n and w line.

BAYLOR COUNTY — Fain-McGaha Oil Corp., Wichita Falls, W. H. Portwood G, 80, 1, 1573 TE&L sur, 450 ft from n and e lines of nw¼. Silk & Chenault, Wichita Falls, W. H. Portwood, 80, 1, W. Godden sur, 150 ft from s and e lines.

BEXAR COUNTY—L. H. Wentz & McElreath & Suggett, San Antonio, A. B. Stephens, 60, 1, P. W. Hayrs sur, 2100 ft from n and 960 ft from e line.

BLANCO COUNTY—Meeks & Smith, San Antonio, E. W. Walker, 735, 1, No. 23 N. Mixon sur, 360 vs. from w and 482 vs. from s line.

BRAZORIA COUNTY—Mills Bennett Prod. Co., Houston, T. J. Poole, 1, T. & W. Alley sur, 1390 ft from e and 100 ft from se line

BROWN COUNTY — Outhier Oil Synd., Brownwood, J. W. Dabney, 170, 1, M. Cherry sur, 150 ft from s and w lines of Blk. 14. T. H. Dische et al, Coleman, S. T. Hunter, 199, 1, No. 282 S. Jones sur, 200 ft from n and w lines. J. E. Ellis, Brownwood, B. S. Boysen, 40, 1A, S 604, P. Mangel sur, 260 ft from se and 675 ft from sw line.

CALLAHAN COUNTY—Putnam Oil Co., Cisco, R. F. Weddington, 35, 13, S4, Bayland Asy. sur, 300 ft n of No. 7. Greathouse & Russell, Baird, W. A. Ramsey, 100, 3, 2282 TE&L sur, 750 ft from w and 450 ft from e li. Woodley Pet. Corp., Abilene, P. G. Hatchett, 320, 16, S 20, D&D Asy. sur, 300 ft n of No. 15; 17, 300 ft e of No. 16.

COLEMAN COUNTY — Robert Oil Corp., Breckenridge, R. C. McClure, 320, 1, S 301, J. R. Beall sur, 1961 ft from n and 330 ft from e line. W. L. Jackson et al, Burkett, Audas, 50, 1, E. M. Justice sur, 750 ft from e and 150 ft from s line. Lloyd Oil Corp., Fort Worth, G. B. Bartholomew, 310, 13, No. 279 Wm. Ferris sur, 400 ft n of No. 8. F. A. Lane, Cross Plains, E. E. Rich sur, 165, 1, Allen sur, 450 ft from e and 870 ft from s line.

COOKE COUNTY — Danciger O&R Co., Fort Worth, J. C. Reeves, 60, 1, A. G. Harris sur, 150 ft from n and e lines. H. Fleitmann B, 40, 1, L. Mikel sur, 150 ft from n and e lines. United Prod. Co., Wichita Falls, A. J. Dennis, 20, 1E, J. S. Stump sur, 450 ft from n and 150 ft from w line. Faith Oil Corp. & Deep Rock Oil Co., Wichita Falls, R. M. Lawson, 210, 1, H. Nail sur, 150 ft from s and w lines.

CALDWELL COUNTY—Humble O&R Co.,

Tabulation and Comparison on page 56

Houston, F. Gray C, 48, 12, J. Hinds sur, 150 ft from n and 253 ft from w line.

CHAMBERS COUNTY—Sinclair O&G Co., Houston, A. McKinney, 5, Griffith-Hodges sur, 50 ft from n and w lines. Rio Bravo Oil Co., Houston, A. M. Fisher, 20, 1, Wm. Bloodgood sur, 200 ft from w and 50 ft from s line. Sun Oil Co., Beaumont, Chambers County Agricultural Co., 50, 6, Wm. Bloodgood sur, 160 ft from n and 50 ft from e line. Humphreys Corp., Houston, Kirby Pet. Co., 93, B 8, H. Griffith sur, 200 ft nw of No. B7.

EASTLAND COUNTY—McLester Oil Co., Eastland, H. Exall, 40, 1, S 55, B 4, H&TC sur, 600 ft from e and 300 ft from s li se¼ ne¼. Texas Development Company, Eastland, Wolstenholm, 174, 2, S 44, B 4, H&TC sur, 200 ft from e and 225 ft from n line.

ECTOR COUNTY—Humble O&R Co., Wichita Falls, E. Jones, 160, 1, S 6, B 44, T&P sur, 423 ft from w and 330 ft from s li sw¼. Landreth Prod. Corp., Fort Worth, University, 160, T4, S 2, B 35, Univ. sur, 880 ft w of No. 3.

EDWARDS COUNTY—Jas. Dalglish, Tulsa, Peterson, 3, S 82, B E, HE&WT sur, 850 ft from n and 1100 ft from w li sec.

ERATH COUNTY—Texas Pacific Coal & Oil Co., Fort Worth, G. M. Allen, 6, S 24, I. Ry. sur, 1075 ft from s and 2450 ft from w li sec.

FORT BEND COUNTY—Gulf Prod. Co., Houston, T. W. Davis, 59, M. Young sur, 400 ft sw of No. 21.

GRAY COUNTY—Midwest Exploration Co., Amarillo, Cobb, 160, 1A, S 165, B 3, I&GN sur, 1320 ft from w and 400 ft from s li nw¼; J. B. Bowers, 80, 2, S 63, B B2, H&GN sur, 990 ft from n and 330 ft from e li w½ sw¼; J. B. Bowers A, 80, 2, S 62, B B2, H&GN sur, 990 ft from n and 330 ft from e li w½ sw¼. Texas Co., Wichita Falls, G. H. Saunders, 600, 21, S 1, B 1, B&B sur, 1214 ft from e and 1265 ft from s li sec.; W. J. Brown, 246, 2, S 137, B 3, I&GN sur, 170 ft from n and 330 ft from e li w½. Parton et al, Amarillo, Morse, 80, 1, S 5, B 26, H&GN sur, 330 ft from e and 990 ft from s li nw¼. Mid-Continent Pet. Corp., Tulsa, M. L. Langham, 235, 3, S 1, B B2, H&GN sur, 269 ft from n and 771 ft from w line.

GUADALUPE COUNTY—Cranfill & Reynolds, Cisco, J. McIntyre, 100, 1, A. Gibson sur, 150 ft from s and e lines. Ray Oil Co., San Antonio, R. Felsing, 120, 1, No. 20 M. Baker sur, 300 ft from nw and 450 ft from ne line.

HARRIS COUNTY — Woods & Bennett, Humble, Fee, 2, 1, Jas. Strange sur, 10 ft from n and e lines. South Texas Pet. Co., Houston, R. B. Morris, 100, 15, W. T. Charles sur, 390 ft s of No. 14.

HARDIN COUNTY — Ada Belle Oil Co., Batson, Gulf, 5, 140, B 8, L 2, C. Choate sur, 68 ft from e and 115 ft from s li.

HENDERSON COUNTY—L. G. Bradstreet Co., Fort Worth, J. J. Shanuessy, 160, 1, Isard sur, 2876 ft from n and 300 ft from w li sec.

HUTCHINSON COUNTY—Dunigan Bros., Pampa, J. A. Whittenburg, 40, 2, S 12, B Y, M&U sur, 330 ft from n and w li ne¼ nw¼. Continental Oil Co., Wichita Falls, J. B. Sanford, 80, 1, S 80, B 46, H&TC sur, 330 ft from n and e li n½ s½. Combination O&G Co., Amarillo, Johnson, 40, 1, S 34, B Y, A&B sur, ne cor of sw¼ of sw¼. Texas Co., Wichita Falls, E. J. Moore, 160, 6, S 125, B 4, I&GN sur, in sw¼.

IRION COUNTY—Straughan & Texannati, Mertzon, J. M. Nutt, 40, 3, B 6, GCSL sur, 150 ft from n and 750 ft from e li nw¼ nw¼.

KAUFMAN COUNTY—Alexander & Winter, Mesquite, Barrow, 215, 1, R. A. Terrell sur, 200 ft from w and 2360 ft from s li.

LIBERTY COUNTY—Gulf Prod. Co., Houston, W. P. H. McFadden, 947, 2, J. McFadden sur, 7092 ft from e and 530 ft from s line. Mission Drilling Co., San Antonio, E. Cook, 600, 1, H. H. Pead sur, 1000 ft from n and w lines. Houston Prod. Co., Houston, Barngrover, 6, 15, J. Devore sur, 50 ft from w and 160 ft from s line. Cranfill & Reynolds Houston, N. Esperson, 676, 14, C. W. Fisher sur, 390 ft n of No. 8. Corrected location. Empire G&F Co., Houston, N. O'Brien, 100, 13, M. G. White sur, 867 ft from s and 624 ft from w line.

PANOLA COUNTY — E. P. Knutts, Fort Worth, M. I. Dunham, 2, 1, C. Haley sur, center. S. E. Bell, Trustee, Carthage, Waterman, 1, Hendricks sur, center. Natural Gas Prod. Co., Shreveport, T. Moore, 65, 3, B. C. Jordan sur, 7850 ft from w and 7784 ft from n li sur.

PECOS COUNTY—C. S. Messinger et al, Royalty, Byrne, 8, 1, S 54, B 10, H&GN sur, 1170 ft from nw and 1260 ft from sw li sec. Gulf Prod. Co., Houston, I. G. Yates, 33, RCSL sur, 2640 ft from w and 900 ft from s li sur. M. A. Smith, 640, 26, S 28, B 194, GC&SF sur, 990 ft from n and 2510 ft from w li sec. Cardinal Oil Co., San Angelo, J. H. Tippett, 160, 2, S 40, B 194, GC&SF sur, 150 ft from s and w li ne¼. Dixie Oil Co., Inc., McCamey, J. H. Tippett, 3, S 61, B 194, GC&SF sur, 150 ft from n and 680 ft from e line.

REFUGIO COUNTY — Moody-Seagraves Prod. Co., San Antonio, St. Johns, 203, 1, Blk 3, Refugio sur, 150 ft n of No. 3.

REAGAN COUNTY — Big Lake Oil Co., Texon, University, 640, 180, S 2, Blk. 2, 1720 ft from e and 920 ft from s li se¼.

SHACKELFORD COUNTY — M. C. H. Corp., Albany, D. J. Jones, 2, 1, S 1, Blind Asy. sur, 95 ft from n and 180 ft from w line. Meridian Pet. Co., Tulsa, T. Durham, 1, 1, S 1, Blind Asy. sur, 150 ft from n and 82 ft from w line. Texas Co., Cisco, I. P. Matthews, 80, 1, S 57, B 1, ET Ry. sur, 1610 ft from e and 644 ft from s li sec. P. S. Kendrick, Albany, A. Hickman, 40, 1, S 70, LAL sur, 450 ft from n and 150 ft from w li sec. Chas. Welch, Albany, W. H. Stephens, 14, 6, S 6, Blind Asy. sur, 300 ft se of No. 2. Miss L. D. Hill, Abilene, L. H. Hill, 9, 5, S 1, B 64, Blind Asy sur. Jno. Morrisey, Fort Worth, W. Webb, 10, 1, S 19, B 11, T&P sur, 150 ft from s and e lines.

SAN PATRICIO COUNTY — Cosden Oil Co., Fort Worth, Schmalstieg, 160, 1, S 9, G. H. Paul sur, center of se¼. Union Producing Co., Houston, Welder, 4, E. Portillo sur, 3000 ft from n and 4500 ft from e line.

SCHLEICHER COUNTY—J. D. Wesner, San Angelo, L. E. Ratliff, 1, S 77, B LL, TC Ry. sur, center of sec.

SMITH COUNTY—McElreath & Suggett, Fort Worth, J. Gilliam, 78, 1, J. C. Robertson sur, 200 ft from n and w lines.

TARRANT COUNTY—E. S. Allen, Haslet, C. Maloney, 80, 1, W. G. Finley sur, 1300 ft from n and 900 ft from e line.

THROCKMORTON COUNTY—Nate Rosenbaum et al, Breckenridge, W. E. Parks, 80, 1, 700 TE&L sur, 450 ft from s and w lines.

TOM GREEN COUNTY—Mintex Oil Co., San Angelo, H. C. Campbell, 640, 1, S 180, SP Ry. sur, 456 ft from s and 632 ft from w li sec.

UVALDE COUNTY—Mission Drilling Co., San Antonio, Uvalde Pecan Co., No. 1, L. Taylor sur, 3 mi from sw and ¾ mi from se line.

VAN ZANDT COUNTY — Pure Oil Co., Fort Worth, R. L. Wells, 51, 8, Moore-Gross sur, 141 ft from n and 838 ft from e line; A. D. Clark, 24, 4, Jno. Walling sur, 175 ft from w and 200 ft from s line; J. C. Stewart, 16, 2, M. Gross sur, 150 ft from e and 50 ft from s line; R. H. ePters, 70, 2, NCSL sur, 754 ft from n and 200 ft from e line; Church Lot, 1½, 1, M. Gross sur; J. F. Crim, 40, 1, J. Walling sur, 896 ft from n and 200 ft from w line; W. F. Swain, 48, 1, Jno. Walling sur, 250 ft from n and 200 ft from w line. Texas Co., Houston, G. W. Carter, 160, 1, Wm. Daniel sur, 150 ft from s and w lines. Pure Oil Co. & Texas Co., Fort Worth, W. H. White, 20, 1, Jno. Walling sur, 748 ft from n and 225 ft from w line.

WICHITA COUNTY — Primrose Ref. Co., Wichita Falls, W. T. Kirkpatrick, 30, 1, Blk. 1446 sur, 800 ft from w and 150 ft from s line. C. C. Julian O&R Co., Oklahoma City, W. W. Overby, 100, 6, J. M. Sharp sur, 150 ft e of center of w line. White & Duncan, Wichita Falls, K. T. Goetze, 50, 6, SA&MG sur, 750 ft from e and 450 ft from s line. O. R. Tautenhahn, Wichita Falls, A. J. Van Cleve, 40, 1, RRVL sur, 150 ft from s and w lines of Blk. 105. Culbertson Co., Wichita Falls, J. & J. Waggoner, 465, 68, S 13, BS&F sur, 2221 ft from n and 102 ft from e line. United Prod. Co., Wichita Falls, W. L. Hodges, 40, 17A, H&TB sur, 64 ft se of No. 5. Mid-Continent Holding Corp., Wichita Falls, Burnside, 38, 8, B 128, J. M. Sharp sur, 450 ft from n and 150 ft from e line. Jno. O'Neil, Wichita Falls, J. B. Honaker, 26, 1, C&M sur, 150 ft from n and w lines. T. M. Conrey, Wichita Falls, H. Willis, 60, 16, BBB&C sur, 300 ft nw of No. 8. R. R. Clark et al, Wichita Falls, J. F. Bickley, 400, 5, S 2, B 4, C&M sur, 1050 ft from n and 150 ft from e line. Jno. O'Neil, Wichita Falls, Fee, 83, 4, S 32, B 5, H&TC sur, 2440 ft from e and 545 ft from s line. W. R. Fullerton et al, Wichita Falls, Foster-Allen, 100, 5, H&TB sur No. 1, 300 ft s of No. 4. Steele Drilling Co., Wichita Falls, Kemp-Kempner, 40, 1, B 57, WVFL sur, 150 ft from s and w lines of ne¼. Jno. O'Neil, Wichita Falls, J. J. Baker, 320, 29, S 29, B 5, H&TC sur, 1860 ft from n and 750 ft from e line. Arkansas Fuel Oil Co., Wichita Falls, Kemp-Kempner B, 34, 45, B 82, WVFL sur, 300 ft w of No. 32.

WILBARGER COUNTY—Waggoner Ref. Co., Inc., Electra, W. T. Waggoner P, 11, S 35, B 2, H&TC sur, 400 ft se of No. 6. Fain-McGaha Oil Corp., Wichita Falls, W. T. Waggoner S, 150, S4, S 24, B 4, H&TC sur, 475 ft from n and 550 ft from w li ne¼; W. T. Waggoner W, 100, 26, S 32, B 4, H&TC sur, 1420 ft from w and 1650 ft from n line.

WARD COUNTY — Gulf Prod. Co., Fort Worth, Hutchings, 640, 5, S 3, B F, G&MMBA sur, 330 ft from s and w lines of sec.

WILLIAMSON COUNTY—J. L. Collins & Co., Corsicana, M. V. Lawrence, 27, 7, S. Miller sur, 150 ft from e and 215 ft from s line.

WHARTON COUNTY—Geo. Hyde, Houston, W. J. Woytek, 20, 7, S. F. Austin sur, 25 ft from e and 635 ft from s line.

WHEELER COUNTY — Long-Williams & Tindall, Shamrock, L. Willingham, 80, 1, S 8, B 27, I&GN sur, 330 ft from s and w lines of nw¼.

WOOD COUNTY—Texas Co., Houston, R. M. Deas, 35, 1, E. Goodsir sur, 150 ft from s and w lines.

YOUNG COUNTY—R. J. Pierce et al, W. J. Baze, 320, 1, Sec. 354 sur, 370 ft from n and 470 ft from e li sec. Independent O&G Co., Fort Worth, J. F. Larimore, 164, 8, S 22, B 46, TE&L sur, 600 ft w of No. 2; 7, 900 ft w of No. 2; 10, 300 ft w of No. 2. C. H. Herbig, Dallas, E. F. Farrow, 80, 1, 1369 TE&L sur,

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Or when the well comes in, and flows intermittently, is your tank a geyser, not being able to hold the pressure, forcing the crude and those gases through the valve or the seams, spraying it everywhere?

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150 ft from s and w lines. Trunick & Faatz, Olney, T. J. Routon, 50, 1, 627 TE&L sur, 150 ft from n and 450 ft from w line. W. R. Duke, Wichita Falls, J. E. Brown, 40, 1, 1368 TE&L sur, 150 ft from n and e lines of s½. G. A. Alexander, Jr., Wichita Falls, N. Wilborn, 100, 1, 1588 TE&L sur, 150 ft from s and w lines. Jacob O&G Co., Graham, J. H. Kinley, 40, 1, 432 TE&L sur, 265 ft from n and 330 ft from e li sec. W. B. Hamilton, Wichita Falls, B. P. Larimore, 40, 7, 2247 TE&L sur, 150 ft from w and 450 ft from s line; 6, 150 ft from n and w lines; 5, 300 ft e of No. 3; 4, 450 ft from s and w lines; 3, 300 ft e of No. 4. Panhandle Ref. Co., Wichita Falls, B. H. Larimore, 40, 3, 2247 TE&L sur, 600 ft s of No. 2; 4, 300 ft e of No. 1, J. Mayes, 320, 1, 439 TE&L sur, 990 ft from s and w lines of sec. E. R. Riggs, Graham, B. P. Larimore, 40, 12, 2247 TE&L sur, 1110 ft from s and 150 ft from w line sec; 13, 150 ft from w and 780 ft from s li sec; 11, 150 ft from w and 480 ft from s li sec. Wooten & Reed et al, Grahanr, D. G. Vick, 246, 1, R. R. Splane sur, 2445 ft from s and 1594 ft from e li sur. H Y Oil Co., Fort Worth, B. P. Larimore, 40, 2, 2247 TE&L sur, 300 ft e of No. 1, Bonner Co. et al, Wichita Falls, A. Weichmann, 100, 1, 173, TE&L sur, 1000 ft from w and 750 ft from s line. Consolidated Oil Co., Wichita Falls, O. Deitrich, 37, 2, G. W. Stell sur, 150 ft from s and e lines. J. H. Davis, Newcastle, G. C. Rochell, 52, 1, E. Crockett sur, 1500 ft from s and 150 ft from e line. Rathke Oil Co., Wichita Falls, A. A. Bernhardt, 60, 1, W. McCarty sur, 750 ft from s and 1745 ft from e li sur. J. E. McKanna, Wichita Falls, J. Ware, 3, 1, J. W. Manning sur. Campbell Oil Corp., Abilene, J. L. Hawkins, 100, 1, I. Holman sur, 900 ft from s and 150 ft from e line. King Royalty Co., Wichita Falls, U. Graham, 40, 2, 2249 TE&L sur, 300 ft w of No. 1; 3, 300 ft w of No. 2; 4, 300 ft w of No. 3.

ARKANSAS

COLUMBIA COUNTY — Shreveport - El Dorado Pipe Line Co., Longino 1, 330 ft e and 330 ft s nw cor 32-18-22.

LOUISIANA

CADDO PARISH — Calatex O&G Co., Shreveport, Taylor-Trosper 2 (amended permit) 8-16n-16w, 1220 ft e and 26.54 ft n of sw cor of Sec. Falcon Oil Co., Inc., Shreveport, Miller 1, 29-20n-15w, 1020 ft n and 1320 ft e of sw cor of Sec.

CAMERON PARISH — Calcasieu Oil Co., Inc., Sulhpur, Watkins 20, 13-12s-10w, 2175 ft e and 173 ft n of sw cor of Sec. Freeport Sulphur Co., Houston, Gulf Land Co. 1, 7-12s-12w, 2100 ft s and 1060 ft w of ne cor of Sec; Gulf Land Co. 2, 8-12s-12w, 2750 ft s and 350 ft e of nw cor of Sec.

DE SOTO PARISH — Arkansas-La. Pipe Line Co., Shreveport, Johnson 2, 7-11n-13w, 2144 ft n and 1343 ft w of center of Sec. Standard Oil Co. of La., Shreveport, Dowling Bros. 2, 5-13n-13w, 330 ft s and 330 ft w of ne cor sw¼ of ne¼.

IBERVILLE PARISH—Standard Oil Co. of La., Shreveport, S. P. & B. Schwing A-1, 73-9s-10e, 250 ft s and 250 ft w of ne cor of se¼.

MOREHOUSE PARISH — Industrial Gas Co., Shreveport, Fee 2, 3-20n-4e, 660 ft s and 660 ft e of nw cor of Sec.

OUACHITA PARISH—Greenwood Production Co., Shreveport, J. E. Morris 1, 36-19n-3e, 3923 ft e and 660 ft s of sw cor nw¼ of nw¼.

RICHLAND PARISH—Northern La. Nat. Gas Co., Shreveport, J. H. Hemler 2, 11-16n-6e, 1995 ft w and 660 ft s of ne cor of Sec. Northern La. Nat. Gas Co., Shreveport, McCoy B-5, 17-16n-6e, 1650 ft s and 660 ft w of ne cor of Sec.

SABINE PARISH — Mr. R. L. Gay, Tr., Zwolle, Sabine Lbr. Co. 5, 15-[illegible]-14w, 330 ft s and 330 ft w of ne cor se¼ of [illegible]-¼.

UNION PARISH—Edwin S. Hall, Monroe, J. M. Edwards 1, 11-21n-3e, 1980 ft w and 660 ft s of ne cor of Sec.

WEBSTER PARISH—Southern Production Corp., El Dorado, Slack 2, 1-22n-11w, 150 ft s and 150 ft e of nw cor nw¼ of ne¼; Slack 3, 1-22n-11w, 175 ft s and 300 ft w of ne cor nw¼ of ne¼; Slack 4, 1-22n-11w, 600 ft n and 600 ft w of se cor nw¼ of ne¼.

WILDCATS FROM ALL SECTIONS

SOUTHERN CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
FULLERTON—		
Standard's Bastanchury 1	300	5850

FULLERTON—L. C. Simmell's Todd 1, will deepen from 1740 ft; Fricke 1, lcn. Standard's Bastanchury 1, dr oil sand 5865 ft, after producing 300 bbls.

HUNTINGTON BEACH—Barnsdall's Syndicate 1, dr shale 6680 ft.

MONETA—Ohio's Fish 1, dr shale 6700 ft, slight oil showings.

MONTEBELLO—Weist and Calthart's Germain 1, rigging rotary to deepen from 4740 ft.

NEWHALL—National Securities Co.'s Seeple 1, 1-3-16, dr shale and oil sand 970 ft. Southern California Drilling Co.'s Needham 3, pumping 120 bbls 22 gravity oil, td 1650 ft. York and Lockhart's Clampitt 3, 13-3-16, lcn. Webb and Bush's Thumbull 1, rigging up rotary.

PLAYA DEL REY — Corey, Randall and Clarke's No. 1, lcn.

PUENTE HILLS—H. A. Bardeen's Didier 1, dr hard sand 1700 ft. Grimes and Girrard's No. 1, fsh for cas 1510 ft. Rio Hondo Pet. Co.'s Rowland 1, dr oil sand 2450 ft. Union's Sansinena 11, dr shale 3765 ft. Western Gulf's Diamond Bar 1, fsh for cones 6020 ft.

ROSECRANS — Burlingham Pet. Corp.'s Hardy 1, dr shale 3818 ft. McMahon and McDonald's Kirst 1, dr 4414 ft. Tri State Pet. Corp.'s No. 1, dr shale 3058 ft.

SAN FERNANDO—Shell's Andrews 1-1, dr shale and hard sand 3606 ft.

SANTA FE SPRINGS — L. S. Hartman's Campos 1, dr 4065 ft. Tureco Oil Co.'s Cole 1, 29-2-11, dr gray sand 5380 ft. Union's Community 1, dr shale 2440 ft.

TORRANCE — California-Ventura Oil Co.'s Holston 1, 31-3-14, dr shale 2822 ft. Rio Grande's Watson 1, fsh for drill pipe, td 5805 ft.

NORTHERN CALIFORNIA

Company, Well and Location	Initial Production Bbls.	Depth
TULARE COUNTY—		
Terra Bella Oil Co.'s Gardiner 1, 35-22-27	25	918

KERN COUNTY

ANTELOPE PLAINS—J. Wrenn's No. 1, 32-25-17, ur 640 ft.

BELRIDGE—Richfield's Belridge 1, 22-27-20, repairing cas, td 665 ft. Rio Grande's Garcia 1, 18-28-22, fsh for drill pipe, td 3680 ft. K. C. Wallace's No. 1, 32-29-21, dr shale 3388 ft.

BUTTONWILLOW — Nordon Oil Corp.'s Salisbury 1-A, 20-in cas cmt 1230 ft.

COMANCHE POINT—W. W. Stabler's No. 1, 4-11-18, dr shale 1600 ft.

EDISON—Petroleum Securities Co.'s Johnson-Moss 1, 14-29-29, dr 225 ft. F. M. Sayre's No. 1, 5-30-29, co 4220 ft. Shell's No. 2-1, 33-29-29, dr shale 5560 ft.

EL TEJON—Elmer Oil Co.'s Tejon 1, 15-30-30, dr shale 4278 ft. J. J. Ritchie's No. 1, 33-11-19, sp.

LERDO—Shell's Lee 1, 23-28-26, dr shale 4465 ft.

McKITTRICK—Ohio's M. M. 1, 32-20-22, dr shale 6520 ft.

PATTIWAY—H. A. Bardeen's Klipstein 1, 18-10-23, dr shale 1150 ft; Ramsey 1, 10-10-23, dr shale 2919 ft.

SEMITROPIC—Shell's Williams 1, 17-27-23, dr shale 4260 ft.

SHALE HILLS—Rio Cal Pet. Co.'s No. 1, 2-27-18, dr 900 ft.

WEED PATCH—Shell's Porter-Day 1, 29-30-29, co 4975 ft.

SANTA BARBARA COUNTY

CAMPBELL'S POINT — Bolsa Chica Oil Corp.'s Augur 191-1, 24-4-9, dr shale 600 ft.

CASITAS PASS—Standard's Shepard 2, 26-4-25, coring shale 820 ft.

CASMALIA—Wildcat Oil and Royalty Co.'s Donovan 1, 20-10-35, dr 4584 ft.

EL TORO—Shell's Fithian 1, 18-4-25, dr hard sand 4038 ft.

GATO RIDGE—Barnsdall's Tegnazzini 1, 9-8-32, dr shale 2200 ft.

GOLETA — Walter Barnhart's Pomatto 1, 1-4-29, co to 1850 ft, swabbing water. General Pet.'s Crandall 138-1, plugged to 4665 ft, making production test, td 4930 ft, showing oil and gas. Ring Pet. Co.'s More 1, dr shale 4520 ft.

LOMPOC—Prairie's Scyvers 1, 11-7-35, dr gray sand 3775 ft.

NAPLES—J. H. Cochran's No. 1, 7-4-29, rigging up rotary.

ORELLA—Shell's Orella 1, dr shale 2288 ft.

POINT CONCEPCION—Standard's Garber 1, dr shell 4890 ft. Universal Consolidated Oil Co.'s Concepcion 1, 30-5-34, dr gray sand 4000 ft.

PURISIMA—Vaqueros Major Oil Co.'s Annex 1, 6-7-33, bailing on test, making oil, td 2997 ft.

SANTA MARIA—O. C. Field's Norswing 1, 8-9-33, showing gas while swabbing, td 3665 ft; Bradley 1, pulling 4½-in liner, td 5267 ft.

SANTA YNEZ—Deuell and Cole's Brinkinoff, 9-7-30, dr shale 3100 ft.

VENTURA COUNTY

FILLMORE—General Pet.'s Burson 1, 6-3-19, dr 2675 ft.

HOPPER CANYON—George H. Hadley's No. 1, 13-4-9, dr shale 900 ft.

PIRU—Bolsa Chica Oil Corp.'s Snow 1-A, 4-4-18, dr out cmt below 6¼-in cas 2375 ft. A. N. Macrate's Eureka 1, 32-4-18, rigging up.

RINCON—Associated's Snowball 1, 19-4-24, m on iron 2080 ft. Chanslor-Cranfield Midway's Hobson A-2, 23-3-24, repairing rig after fire, td 7479 ft.

SANTA MONICA MOUNTAINS—Olympic Corp.'s Calabasas 1, 18-1-17, dr shale 5475 ft.

SANTA PAULA—Empire Oil Co.'s Steen 4, 13-4-21, dr shale 3728 ft. George C. Thompson's No. 1, 15-4-21, dr shale 1005 ft.

SATICOY—Standard's Citrus 5, 10-2-22, re-dr 8460 ft.

SOMIS—Shell's Everett 1, dr shale 2220 ft.

VENTURA—Prairie's Sexton 1, 30-3-22, dr shale 6388 ft.

MISCELLANEOUS

FRESNO COUNTY—Ohio's Welch-Brix 1, 8-21-15, rigging up. Richfield's Schrock 1, 33-22-16, dr hard sand 2100 ft.

KINGS COUNTY—Hornaday and Huggins' No. 1, 32-14-18, fsh 5050 ft. J. E. O'Donnell's No. 1, 7-23-20, fsh for drill pipe 4310 ft.

MONTEREY COUNTY — Standard's Piedmont 1, 23-22-7, dr gray sand 4655 ft.

STANISLAUS COUNTY—Oakdale Oil Co.'s Gilbert 1, 3-2-10, sd 3520 ft.

SAN LUIS OBISPO COUNTY—Panorama Oil Co.'s Panorama 1, 7-31-21, fsh for 6¼-in cas, td 4010 ft. Paso Robles Syn.'s Emerick 1, 34-27-15, trying to locate water, td 3890 ft. Libby Pet. Co.'s Upton 1, 31-27-15, dr hard sand 4450 ft. Texas Pacific Coal and Oil's No. 1, 25-32-14, sdtr iron 4000 ft.

TULARE COUNTY — Consolidated Properties' No. 1, 35-22-17, lcn. Western Oil and Exploration Co.'s No. 1, 35-22-27, dr 700 ft. Roy White's No. 1, 8-23-26, 8⅝-in cas re-cmt 3975 ft, td 4020 ft.

ABBREVIATIONS

NOTE—The following is the explanation of abbreviations, signs, etc., used in completion and wildcat reports: *—dry hole, abandoned well; ‡—salt water; †—junked and abandoned; ¶—million feet of gas; abn—abandoned; bbls—barrels; b.s.—basic sediment; cas—casing; co—cleaning out; dk—derrick; dr—drilling; fsh—fishing; ft—feet; in.—inches; lcn—location; m—milling; n, s, e, w—north, south, east, west; r—reaming; sd—shut down; sdtr—sidetracking; sp—spudding; sr — straight reaming; std—standardizing; sw—salt water; td—total depth; ur—underreaming; wo—workover; wosr—waiting on standard rig.

ARKANSAS

Company, Well and Location	Initial Production Bbls.	Depth
LITTLE RIVER COUNTY—		
C. F. McDonald, Black 1, 12-13-28	*	2180
OUACHITA COUNTY—		
Magnolia Pet. Co., Grayson 1 21-15-19 (sec compl.)	20	2184
UNION COUNTY—		
Marine Oil Co., P. Winn Est. B-3, 10-18-13	180	3559

ASHLEY COUNTY—J. C. Marcum's McCarry 1, 10-19-14, set 6⅝§ cas 3467 ft, td 3555 ft.

CALHOUN COUNTY—Tidal Oil Co.'s Ark. Timber 1, 3-16-14, tested dry through ds 2092-2131 ft, dr 2210 ft.

COLUMBIA COUNTY—Sam Y. Dorfman's Merrick 1, 16-17-20, sd 400 ft.

CLEBURNE COUNTY—Donnell et al's Fee 1, 33-11-9w, set 8⅛-inch cas 1484 ft, td 1575 ft (previously carried in Cleveland County). Cosden Oil Co.'s Donithan Lbr. Co. 1, 19-9-10, dr slate 3843 ft.

DREW COUNTY—McClintock & Goedke's Ogle 1, 33-13-5, sd 2625 ft.

FAULKNER COUNTY—Gold Creek O&G Co.'s Stermer 2, 17-4-13, lcn abn will not drill.

FRANKLIN COUNTY—Red Bank Oil Co.'s Hamm 1, 33-10-26, set 10-inch cas 2344 ft, td 2387 ft.

GARLAND COUNTY—H. H. Given's Garrett 1, 1-13-19w, dr sandy lime 3608 ft.

GRANT COUNTY—J. R. Lockhart's Cunningham 1, 11-5-16, dk.

JOHNSON COUNTY—Ark. La. Pipe Line Co.'s Cline 1, 16-10-24, dr hd sand 2575 ft. Blackwell O&G Co.'s Wyver 1, 21-8-23, jarring cut 6-inch cas 2100 ft, td 5600 ft. Conn Gables et al's Holing 1, 20-9-25, sd wo 2070 ft (corrected depth).

LA FAYETTE COUNTY—Crawford Drilling Co.'s Vaughan 1, 25-19-25, dk.

LAWRENCE COUNTY — Marguerite Dev. Co.'s Broadway 1, 31-17-1, sd 45 ft.

LITTLE RIVER COUNTY—C. F. McDonald's Black 1, 12-13-29, dry abn, td 2180 ft. Buck Oil Co.'s Taafe 1, 23-12-32, sdtr 110 ft, 4-inch cas 2502 ft.

LINCOLN COUNTY — B. F. Thompson, Tr.'s, McGhee 1, 8-8s-7w, rig up.

LOGAN COUNTY—M. W. Greesom's Perk 1, 21-8-24, sd 1309 ft. J. H. Flowers' White 1, 13-6-26, ur 5 3/16-in cas 3570 ft, td 3600 ft.

MADISON COUNTY—J. W. Baxter's Hallam 1, 17-16-26, dr 500 ft.

MILLER COUNTY—Lenz et al's Johnson 1, 24-15-26, claimed 430 ft test oil through ds, set 6-inch cas 2844 ft, td 2847 ft.

OUACHITA COUNTY — Anderson et al's Buck 1, 7-15-17, fsh for junk 2723 ft. Belmont et al's Buck 1, 16-15-17, sd 18 ft laying water line. Magnolia Pet. Co.'s Grayson 1, 21-15-19, pumping 20 bbls oil no water, td 2184 ft, deepened from 1478 ft where it pumped 50 bbls oil.

PIKE COUNTY—P. R. Anderson's Tilyou 1, 26-8s-24w, dk pat.

POPE COUNTY—Ark. La. Pipe Line Co.'s J. H. Moore 1, 16-9-21, dr 450 ft. Cosden Oil Co.'s Mo. Pac. R. R. 1, 13-9-19w, dr 4740 ft.

SEBASTIAN COUNTY—M. W. Greesom's Spears 1, 9-7-29w, dr hd sand 3165 ft. Mansfield Gas Co.'s Fee 14, 1-4n-31w, set 10-inch cas 330 ft. Ozark Nat. Gas Co.'s Weaver 1, 27-8-30, dr 1950 ft.

SCOTT COUNTY — Heavener O&G Co.'s Reser 1, 36-3-26w, straightening hole, td 1530 ft.

UNION COUNTY—H. L. Hunt's Pratt 6, 7-18-15, pumping sw, td 2214 ft. Malloy & Co.'s Robertson 3, 6-18-15, lcn; Murphy 1, 1-18-16, rig up. S. B. Hickman et al's Hogg 1, 35-16-17, fsh junk 2157 ft. Marine Oil Co.'s P. Winn Est. B-3, 10-18-13, pumping 180 bbls oil, 1020 bbls sw, elev 173 ft, td 3559 ft; W. B. Thompson A-4, 10-18-13, dr 2485 ft. South El Dorado Oil Co.'s R. Traylor 1, 9-19-15, 6-in cas 2162 ft, topped Nacatosh 2181 ft, wosr td 2185 ft. Modisette Drilling Co.'s Union Sawmill 1, 14-18-14, lcn. Sunby et al's Perdue 2, 23-16-14, sd 3207 ft.

WASHINGTON COUNTY—Taylor et al's

Runny 1, 1-13n-29w, sd wo 700 ft. Lincoln Lease Holding Co.'s Townsite 1, 30-15-32, TA 1500 ft. C. H. Willoughby's Jones 1, 34-16-30, sd 2150 ft. O'Hara & Shetterley's Boyd 1, 12-16-32, TA 850 ft. Delbert Graves' Cunningham 1, 14-15-32, sd in gray sand 602 ft.

WHITE COUNTY—Letona Synd.'s Letona 1, 35-9-8, set 5 3/16-in cas 3500 ft, sd 3650 ft.

VAN BUREN COUNTY — J. S. Martin's Scanland 1, 5-9-13, sd 50 ft.

YELL COUNTY—T. Luckett's Balcon 1, 36-7n-21w, set 6⅝ cas 3637 ft, wo 5 3/16-in cas, td 4165 ft.

NORTH LOUISIANA

Company, Well and Location	Initial Production Bbls.	Depth
DE SOTO PARISH—		
Ark. Fuel Oil Co., C. B. Scott 2, 32-14-13	25	2790
Ark. Fuel Oil Co., Johnson 1, 7-11-13	¶2	3054
Lacy Oil Co., G. W. Sample 1, 1-13-14	*	2925
EAST CARROLL PARISH—		
Louisiana G&F Co., Hicks 1, 12-19-10e	¶47	2340
CALDWELL PARISH—		
Hudson et al, Gandy 1, 4-11-3e	*	1680
WEBSTER PARISH—		
Magnolia Pet. Co., Gardner 1, 1-23-11	5	2727

BIENVILLE PARISH—Ark. Fuel Oil Co.'s A. G. Thomas et al 1, 22-16-10, dr lime 2562 ft; Gardner et al 1, 22-16-10, set 7-inch cas 2066 ft. W. A. Nichols' McDermott 1, 28-18-7w, tested 1 fourble dr mud and 10 ft oil thru ds 2340 ft, arr set cas.

BOSSIER PARISH — Andrews & Davlin's Nattin 1, 15-22-14, claim core oil sand, sd wo 1132 ft. Morgan et al's Weatherbee 5, 21-19-11, set 6⅝ cas 1805 ft, td 1811 ft. Autrey Oil Co.'s McDade 1, 28-19-11, dk pat; Johnson 1, 34-19-11, rig up.

CADDO PARISH—R. W. Norton's Hill 1, 33-23-16, set 6⅝ cas 5165 ft bailed dry, arr deepen, td 5315 ft (corrected depth). Falcon Oil Co.'s Oden 1, 19-19-14, old well arr deepen, td 2409 ft.

CALDWELL PARISH — Hudson et al's Gandy 1, 4-11-3e, sw abn, td 1680 ft.

CATAHOULA PARISH — National O&G Co.'s Kirkland 1, 35-9-6e, set 8-inch cas 2000 ft, sd wo 2412 ft. Nick Babare et al's McGraw 1, 30-10-9e, reset 10-inch cas 400 ft, dr gumbo 990 ft.

CLAIBORNE PARISH — Triangle Drilling Co.'s Cox-Fee 1, 6-19-5w, lcn. El Dorado Chief Oil Co.'s Simmons 1, 27-20-7w, sd in bldrs and shale 2240 ft. Leue Oil Co.'s Taylor 1, 16-22-6w, sd in gumbo, 3004 ft.

CONCORDIA PARISH—Joe Marr et al's Maxwell 1, 33-3-8e, 8-inch cas stuck 1300 ft, td 2820 ft. A. C. Glassell et al's Pittsfield Plantation 1, 41-8-10e, 8-inch cas 1370 ft wo cement set bottom after gas blowout, td 1453 ft.

DE SOTO PARISH — Benson O&G Co.'s Harris 1, 6-10-13, sd 3650 ft. J. M. Burnham's Hood 1, 3-11-14, dr chalk 1650 ft. Ark. La. Pipe Line Co.'s Whitney 1, 28-10-14, coring 2141 ft; Johnson 1, 7-11-13, 1,800,000 cu ft gas td 3054 ft; Johnson 2, 7-11-13, rig up. Mich-Louzanna O&G Dev. Corp.'s Payne 1, 12-11-16, m out cas to 1690 ft, arr set 4¼-inch cas td 1900 ft. Gulf Ref. Co.'s Dry et al 1, 14-11-15, rig up. Standard Oil Co. of La.'s R. A. Nelson 1, 36-15-13, dr 2000 ft. Fuller & Canard 1, 6-13-13, lcn. Lacy Oil Co.'s G. W. Sample 1, 1-13-14, sw abn, td 2925 ft. Sam Gold's Platt 1, 23-13-14, rig up. Odell & Lawton's Tidwell & Tull 1, 11-13-14, topped chalk 1500 ft, base chalk 1830 ft, top Nacatosh 1236 ft, sd 2612 ft. T. L. Philp's Talbot 1, 9-13-13, dk. Pelham & Bundy's Rhodes 1, 32-13-14, rig up. Frank Melat, Inc.'s, Schryver 1, 35-14-13, topped Nacatosh 1187 ft, base chalk 1932 ft, set 6⅝ cas 2758 ft, 5 ft sand tested dry, show oil 2782 ft, cor 2785 ft. Ark. Fuel Oil Co.'s C. B. Scott 2, 32-14-13, pumping 50 bbls 50 per cent sw 2790 ft.

EAST CARROLL PARISH—Louisiana G&F Co.'s Hicks 1, 12-19-10e, set 8⅛-inch cas top gas rock 2333 ft, gauged 47,883,000 cu ft dry gas, r. p. 1080 ft, td 2340 ft.

FRANKLIN PARISH—Davis et al's Moore 1, 12-11-6e, sd 1430 ft.

JACKSON PARISH—El Dorado Chief Oil Co.'s Southern Adv. Paper Co. 1, 35-15-4w, sd 1130 ft (corrected depth).

LINCOLN PARISH—Ark. Fuel Oil Co.'s Lewis & Co. 1, 26-20-4w, topped red beds 33-5 ft, r to bot in anhydrites 4001 ft.

MOREHOUSE PARISH—Ruston Drilling Co.'s Tucker & Platt 1, 8-20-6e, tested dry thru ds 2440-52 ft, cor gas rock 2474 ft.

NATCHITOCHES PARISH — S. D. McDaniels' Clark-Morse 2, 23-5-6w, sd 2436 ft. Robeline O&G Co.'s Winn 1, 7-8-9w, sd in rock 1635 ft. W. M. Coats' Collins 1, 28-9-10, dr gumbo 1435 ft.

RAPIDES PARISH—Ayers Bros.' Wicklipp 1, 9-5n-2w, sd 2650 ft.

RED RIVER PARISH — W. D. Ball's Krumbholz 1, 32-14-10, sd 2600 ft. E. C. Lucas' La. Delta Pecan 1, 27-13-11, set 8-inch cas 785 ft. Geo. L. Pace et al's Clarkson 1, 30-12-9 sp set 10-inch cas 212 ft.

RICHLAND PARISH — Austin & McDonald's Millsaps 2, 17-17-6e, sd 2697 ft; Millsaps 3, 16-17-6e, sd 2477 ft. W. C. Feazel's Landrum 1, 6-16-7e, dk. International Gas Prod. Co.'s LaGrone 1, 7-16-7e, lcn.

SABINE PARISH—McDaniels et al's Batson 1, 16-8-12, 6-inch cas 2193 ft, tested dry wo 2526 ft. Loring Oil Co.'s Peavy-Wilson 1, 21-6-13, top marl 3010 ft, top Blossom 3537 ft, r to bot 4260 ft; Bowman-Hicks 5, 34-8-12, set 6¼-inch cas 3904 ft, cor bro lime 4005 ft; Gardner 1, 27-8-12, set 6⅝ cas 2310 ft, td 2327 ft; Shull 1, 26-8-12, set 6⅝ cas 2381 ft, dr chalk 2510 ft. A. H. Tarver et al's Sabine State Bank 3, 26-8-12, sp 10-inch cas 85 ft. R. L. Gay, Tr.'s, Bowman-Hicks 8, 18-7-13, made 100 bbls head oil, wosr td 2488 ft. Ruston Drilling Co.'s Bowman-Hicks 1, 4-7-12, TA 2640 ft; Bowman-Hicks 2, 35-8-12, sd 2690 ft; Bowman-Hicks B-1, 24-7-14, TA 2740 ft. Warner Quinlan Co.'s Sabine 2, 34-8-12, lcn. Le Grande et al's Giaque 1, 6-7-12, lcn; J. W. Hale 1, 1-7-13, lcn. D. H. Reddick, Tr.'s, Scretchfield 1, 16-9-12, sd wo 3280 ft. Paramount O&G Co.'s Woolums 1, 11-6-12, sd 1650 ft. Zeke Lohman's Wyatt Lbr. Co. 1, 18-4-11, rig up wo. Lohman & Walker's Hubley 1, 21-7-11, sp set 12-inch cas 82 ft. Pelican Nat. Gas Co.'s La. Long Leaf 3, 4-7-11, sp 12-inch cas 96 ft, dr 675 ft; Sabine 3, 6-7-11, rig up. Stacy et al's Polly 1, 18-8-12, rig up. Toteco Oil Corp.'s La. Long Leaf 1, 18-6-12, cored porous lime 4075-77 ft, lost returns blew out, bridged at 2500 ft, dr out bridge to core. Longoria et al's Belton 1, 31-9-13, rig up. Boone, Tr.'s, Hill 1, 4-8-11, dk pat. San Miguel Oil Corp.'s Blankenship 1, 20-9-11, lcn abn. R. L. Gay, Tr.'s, Sabie 5, 15-7-14, lcn.

TENSAS PARISH—Willis et al's Curry 1, 39-11-12e, 8-inch cas 1830 ft, dr 2220 ft.

UNION PARISH—Fred Stovall's Murray 1, 32-23-4e, rig up wo.

WEBSTER PARISH—Pat Hudson's Gardner 1, 1-22-11, dk. Sarepta Oil Co.'s Slack 1, 36-23-11, rig up; Gardner 2, 1-22-11, rig up; Gardner 3, 6-22-10, dk. H. M. Jones Drilling Co.'s Cook 2, 2-22-11, set 6-inch cas 2722 ft; Womble 1, 1-22-11, dk. Ideal O&G Co.'s Coyle 1, 24-23-11, dk. K. C. Supply Co.'s Cockran 1, 36-23-11, set 6⅝ cas 2719 ft, 6 ft sand, plugged back 2713 ft, wo cement, old td 2725 ft. Magnolia Pet. Co.'s Gardner 1, 1-23-11, set 8⅛-in cas 2712 ft, pumping 5 bbls oil 300 bbls sw td 2727 ft; Sallie Coyle 1, 2-22-11, dk; Scroggins 4, 2-22-11, dr 2711 ft. Merrick Oil Corp.'s Slack 3, 36-23-11, dk. S. H. Riggs, Tr.'s, L&A 1, 1-22-11, sd 2100 ft; L&A 2, 36-23-11, dk; L&A 3, 36-23-11, lcn; L&A 4, 36-23-11, lcn. Wingfield et al's Slack 2, 1-22-11, set 6-inch cas 2720 ft; Slack 3, 1-22-11, set 6-inch cas 2727 ft. W. O. Neely's J. R. Slack 1, 12-22-11, lcn. Jimmie Liggitt's Slack 1, 36-23-11, dk; Slack 2, 36-23-11, lcn. K. C. Supply Co.'s Slack 3, 36-23-11, lcn.

MISSISSIPPI

Company, Well and Location	Initial Production Bbls.	Depth
HINDS COUNTY—		
Louisiana G&F Co., Toole 1, 28-6-1e	¶22	2503
Ohio Oil Co., School Board 1, 16-5-1e	*	2511
RANKIN COUNTY—		
Gulf Ref. Co., Rainey 1, 13-5-1e	¶15	2501
Pearl River O&G Co., Littlefield 1, 12-5-1e	¶40	2393

ADAMS COUNTY—A. C. Glassell et al's Stowers 1, 28-8-2w, set 12½-inch cas 246 ft, sd curing titles.

ALCORN COUNTY—Alcorn Pet. Co.'s Mathews 1, 14-2-7, jarring out 6-inch cas, td 2735 ft.

CHICKASAW COUNTY — Hightower & Golsan's Fleming 1, 20-13-3w, sd wo 1414 ft; Fleming 2, 15-13-2w, dk pat.

HINDS COUNTY (Jackson Dist.) — Mrs. Ella Rawls Reeder's State Land 1, 25-6-1e, sd while fsh for 400 ft 4-inch dr pipe, td 2905 ft. Jackson O&G Co.'s Mayes 1, 2-5-1e, supplying gas nearby test, arr plug back to 2458 ft, td 2585 ft. Central Cotton Oil Co. 1, 3-5-1e, dk. Capital L&L Co. 1, 29-6-1e, dr sand 1501 ft. Love Prod. Co.'s Gordon 1, 2-5-1e, set 6⅝ cas with 55 sacks cement 2448 ft. Love Pet. Co.'s Mendoza 2, 12-5-1e, rig up arr sp. Tri-State O&G Co.'s E. S. Wilson 1, 23-6-1e, dk. Dome O&G Co.'s Elton 1, 5-4-1e, arr set 6-inch cas top chalk 2436 ft. Universal Gas Co.'s Holliday & Ross 1, 8-6-2e, dr sand 1043 ft; Sharbrough 1, 28-6-1e, dk. Cane River O&G Co.'s Lufkin 1, 15-5-1e, running sand tester at top chalk 2446 ft. Ohio Oil Co.'s School Board 1, 16-5-1e, sw abn, td 2511 ft. Louisiana G&F Co.'s Toole 1, 28-6-1e, set 8⅛ in cas top chalk 2499-2500 ft, making 22 mil cu ft gas, td 2503 ft. Marine O&G Co.'s Country Club 1, 31-6-1e, dr 1320 ft. Capital O&G Co.'s Clark 1, 10-5-1e, rig up; Brown 1, 28-6-1e, sp.

KEMPER COUNTY (De Kalb Dist.)—W. W. Jones' Rosenbaum 1, lcn not given, dk.

LA FAYETTE COUNTY—F. E. West et al's May 1, 22-10-1w, rig up wo.

LAUDERDALE COUNTY (Meridian Dist.)—Lauderdale O&G Co.'s Lackey 1, 2-7-16, sd 3435 ft. Meridian Nat. Gas Co.'s Mattie Houser 1, 33-8-18, sd in sandy shale 2826 ft.

MADISON COUNTY (Jackson Dist.)—Barney Kennedy et al's Raymond 1, 32-7-2e, dk.

MONROE COUNTY (Amory Dist.)—Amory Dev. Co.'s Bourland 1, 2-13-19, sd wo 2912 ft. Park Bowser's Cowart 1, 2-12-19, sd 85 ft. Associated Royalties' School Board 1, 16-15-17w, dk pat.

RANKIN COUNTY (Jackson Dist.)—Gulf Ref. Co.'s Rainey 1, 13-5-1e, plugged back to 2500 ft from old td 3607 ft, making 15 mil ft gas at 2501 ft. Love Pet. Co.'s Moore 1, 28-6-2e, sd 900 ft. eParl River O&G Co.'s Littlefield 1, 12-5-1e, topped Midway shale 2304 ft, set 6⅝ cas 2383 ft, blew in making est 40 to 50 mil ft dry gas not gauged, td 2393 ft. Pearl Valley O&G Co.'s Moter 1, 12-5-1e, set 6⅝ cas 2415 ft. Jackson O&G Co.'s J. W. Patton 1, 17-5-2e, rig up.

WARREN COUNTY (Vicksburg Dist.)—Henderson et al's Dornbusch 1, 8-18-15, sd with ds in hole, td 2475 ft.

WEBSTER COUNTYJCumberland Oil Co.'s Henley 1, 15-21-11, TA 1865 ft.

WILKINSON COUNTY (Natchez Dist.)—A. C. Glassell et al's Belz-Hoover 1 (formerly carried Fee 1), 1-5-2w, set 12½ cas 465 ft, dr 1300 ft.

YALABOUSHA COUNTY (Water Valley Dist.)—J. D. Collett et al's Blackmer 1, 14-11-4w, fsh for collar 2215 ft, td 2434 ft.

ALABAMA

HOUSTON COUNTY—J. R. Sealey's Fee 1, 13-1n-27e, changing from cable tools to rotary, td 3100 ft.

LAUDERDALE COUNTY — P. J. McAlpine's O'Neal Hrs. 1, 8-2s-13w, re-set 8¼-in cas 1908 ft in white limestone.

MORGAN COUNTY—Albany-Decatur O&G Co.'s English 1, 6-6-4, fsh for cas 4130 ft.

SUMTER COUNTY—B. W. Bates' Fee 1, 3-18-1w, TA 1200 ft; Fee 2, 3-18-1w, rig up wo.

WASHINGTON COUNTY—Hobson et al's Wilson 1, 27-7-1w, sd in limey shale 881 ft; Hobson Bros. 1, 9-8-2w, sd 1450 ft. Oscar Brown's U. S. Land & Cotton 2, no report.

TENNESSEE

DECATUR COUNTY — Chester County O&G Co.'s Montgomery 1, sd 1881 ft.

OKLAHOMA

WOODS COUNTY—T 28n, R 16w, Sec. 23, Peerless Oil Co., Cromwell 1, c nw ne, 6189 ft, set 5-inch dr cemt. T 27n, R 16w, Sec. 33, Sinclair, Share 1, c ne sw, rur 6790 ft.

ALFALFA COUNTY—T 27n, A 11w, Sec. 12, Smith Bros., Forbes 1, ne c se nw nw, sd 1420 ft.

KAY COUNTY — T 27n, R 2e, Sec. 17,

HONEST TOOLS

DRILLING AND FISHING TOOLS

HINDERLITER TOOL COMPANY

ROTARY AND STANDARD CABLE

Blankenship et al's Hansen 1, sw c nw sw, hfw 1865-1910 ft, 8-inch 2960 ft.

HARPER COUNTY—T 26n, R 2e, Sec. 14, Sinclair, Howell 1, c sw sw, td 8578 ft, fsh. T 25n, R 20w, Sec. 12, Empire, Bruce 1, sw c ne ne sw, fsh 5570 ft.

WOODS COUNTY—T 25n, R 15w, Sec. 10, Bu-Vi-Bar et al, Fee 1, se c sw, sd 6104 ft.

GRANT COUNTY—T 25n, R 4w, Sec. 22, Cowden, Vollmer 2, ne c se ne sw, lost tools, sd 5640 ft.

ALFALFA COUNTY—T 24n, R 11w, Sec. 14, J. V. Bailey et al, Acre 1, c sw ne, 8-inch 4660 ft, woc.

GARFIELD COUNTY—T 24n, R 6w, Sec. 9, Pulse & Beamer et al, White 1, se c nw, hfw 4730-4800 ft, hfw 5566-70 ft, td 5580 ft, co 5572 ft.

WOODWARD COUNTY—T 23n, R 17w, Sec. 23, Transcontinental & Prairie, Wilbur 1, ne c, sd 7425 ft.

GARFIELD COUNTY—T 23n, R 4w, Sec. 32, Shell et al, Loomis 1, c nw nw, 3M gas 5584 ft, dr 6020 ft.

NOBLE COUNTY—T 22n, R 1w, Sec. 28, Gypsy et al, Berstram 1, se c nw, dr 5520 ft no show.

WOODWARD COUNTY—T 21n, R 19w, Sec. 15, Burgoyne Bros., Merklin 1, sw c se ne, sd 1910 ft.

BLAINE COUNTY—T 19n, R 10w, Sec. 13, Washoma Pet. Co., Phillips 1, c nw sw, ur 8-inch cas 3220 ft, 3225 ft, hfw, dr 3684 ft.

LOGAN COUNTY—T 18n, R 3w, Sec. 33, Healey et al, Quier 1, se c sw, td 3970 ft. T 17n, R 4w, Sec. 34, Eason Oil Co., Katchor 1, sw c ne sw, co 1150 ft. T 17n, R 1e, Sec. 22, Prairie & Slick, Sims 1, ne sw se, fsh 4750 ft.

KINGFISHER COUNTY — T 16n, R 7w, Sec. 6, Galt Brown, Boch 1, c nw se (owdd) sd 6022 ft.

LOGAN COUNTY—T 16n, R 1w, Sec. 33, Prairie & Slick, Morgan 1, c nw ne, fsh 5275 ft.

PAWNEE COUNTY—T 23n, R 5e, Sec. 15, Cochran et al, McFadden 1, ne c sw, rig.

OSAGE COUNTY—T 23n, R 6e, Sec. 28, Western American 1, nw c se, dr 1810 ft.

PAWNEE COUNTY—T 22n, R 3e, Sec. 26, Wentz Oil Corp., Lillie 1, se c sw ne, dr 1297 ft. T 20n, R 5e, Sec. 22, J. M. Scott et al, Jones 1, sw c ne, dr 1165 ft.

PAYNE COUNTY—T 18n, R 4e, Sec. 6, F. M. Marrs et al, Tietz 1, sw c nw se, lcn.

LINCOLN COUNTY—T 17n, R 2e, Sec. 28, Thurman, Deaner et al, Stufflebeam 1, ne c sw, dr 3360 ft. T 16n, R 2e, Sec. 35, T. B. Slick, Hammer 1, se c sw nw, dr 5790 ft. T 16n, R 4e, Sec. 2, Deep Rock et al, Prowant 1a, nw c ne nw, td 4518 ft, stg 5-inch. T 14n, R 6e, Sec. 5, Atlantic, Ryan 1, se c nw, dr 2375 ft. T 13n, R 4e, Sec. 2, Magnolia Pet. Co., Winship 1, ne c sw, show oil 4155-61 ft, dr.

OKFUSKEE COUNTY—T 12n, R 9e, Sec. 36, Henry Oil Co., Harjo 1, nw c, dr 3280 ft, show oil 3161-85 ft. T 12n, R 10e, Sec. 3, Sheppard et al, Sheppard 1, se c nw sw, fsh 3675 ft.

MUSKOGEE COUNTY—T 11n, R 19e, Sec. 21, E. Mills et al, Martin 1, nw c se, sd 1001 ft.

PITTSBURG COUNTY—T 9n, R 16e, Sec. 32, Pattison et al, McDuff 1, sw c nw se, Wilcox 5556-60 ft sd.

HASKELL COUNTY—T 9n, R 18e, Sec. 10, Marion Oil Co., Sanders 1, nw c ne sw, 2M gas 1800 ft, sd 2692 ft.

LATIMER COUNTY—T 5n, R 18e, Sec. 23, Limestone O&G Co., Shaw 1, nw ne nw, show gas 3100-10 ft, 2M gas 3220-80 ft, sd 3550 ft.

OKLAHOMA COUNTY—T 14n, R 3w, Sec. 32, Mid-Kansas, Messer 1, sw c, dr 5688 ft. T 13n, R 3w, Sec. 17, Prairie & Slick, Dills 1, c se nw, 6707 ft, dr flows lt bbls emulsion daily, estimate 4M gas. T 13n, R 3w, Sec. 15, Magnolia-Ramsey, Johnson 1, ne ne sw, td 6284 ft, show oil, dr 6955 ft. T 13n, R 1w, Sec. 13, Tom Slick, Martin 1, c nw nw, td 6965 ft, pulling csg to abn. T 12n, R 4w, Sec. 17, C. F. Cuniff, Trustee, St. Joseph Orphanage 1, sw c ne sw se, dr 6530 ft. T 11n, R 2w, Sec. 3, Ryan Consolidated, Lawton 1, ne c nw, dr 6743 ft.

CLEVELAND COUNTY—T 6n, R 1e, Sec. 20, Brownfield, Corber 1, c sw ne, sd 6518 ft.

HUGHES COUNTY—T 9n, R 12e, Sec. 29, Canady et al, Kanard 1, nw c sw, sand 3500-3625 ft, hfw, dr 4170 ft.

ROGER MILLS COUNTY—T 12n, R 24w, Sec. 23, Bucy & Stone, Williams 1, c sw, sd 2243 ft. T 11n, R 26w, Sec. 4, J. J. Rook, Davis 1, c nw ne, sd 2840 ft.

BECKHAM COUNTY—T 10n, R 22w, Sec. 29, Roy Johnson, Brower 1, c nw, dr 3650 ft.

CANADIAN COUNTY—T 10n, R 6w, Sec. 1, J. V. Bailey, Robinson 1, c ne nw, sd 150 ft.

BECKHAM COUNTY—T 8n, R 22w, Sec. 20, Carson et al, Denby 1, swc se ne, 1700 ft co.

GREER COUNTY—T 7n, R 22w, Sec. 1, Roy Good et al, Cliffel 1, nw c, sd 1185 ft. T 6n, R 24w, Sec. 17, I. T. I. O. et al, Fee 1, c ne, sd 2290 ft.

CADDO COUNTY—T 6n, R 11w, Sec. 24, Simms Pet. et al, 1, c se nw, rig.

HARMON COUNTY—T 4n, R 24w, Sec. 17, Harmon-Tex Oil Co., Headley 1, ne c, dr 2260 ft.

COMANCHE COUNTY—T 3n, R 9w, Sec. 3, Okla. Nat. Gas Co., Doebel 1, ne sw sw sw, sd 1450 ft.

STEPHENS COUNTY—T 1s, R 9w, Sec. 3, Pelwin Oil Co., Perdy 1, nw c nw ne ne, show oil 2210-13 ft, testing.

PONTOTOC COUNTY—T 5n, R 6e, Sec. 8, Magnolia & Twin State, Kilcrease 1, sw ne ne, td 3513 ft, hfw, pb to 1735-85 ft, no oil, sd.

HUGHES COUNTY—T 5n, R 10e, Sec. 30, Erwin et al, Jones 1, se c ne, hfw 1860-70 ft, dr 4120 ft. T 5n, R 11e, Sec. 15, J. J. Wright, Roberts 1, se c sw, 2M gas 915-18 ft, sd 1475 ft.

GARVIN COUNTY—T 4n, R 3e, Sec. 10, C. R. Obermeyer, Stricklin 1, ne c sw, rust 2680 ft.

COAL COUNTY — T 3n, R 9e, Sec. 26, Blackwell, Gumm 1, nw c, dr 2160 ft.

MURRAY COUNTY—T 2n, R 2e, Sec. 27, Cheafton Royalty Co., Hendricks 1, sw c se nw, dr 2180 ft.

COAL COUNTY—T 1n, R 8e, Sec. 11, W. E. McCraw, King 1, c sw ne, owdd, fsh 3080 ft. T 1n, R 9e, Sec. 31, A. M. Van Orden et al, Foshee 1, sw c ne, dr 1430 ft.

ATOKA COUNTY—T 3s, R 10e, Sec. 18, Brookshire et al, Guinn 1, nw c, sd 80 ft.

CARTER COUNTY—T 4s, R 2e, Sec. 32, Tex-Okla. Drlg. Co., Anderson 1, se c ne se, sd 2580 ft.

LOVE COUNTY—T 6s, R 3w, Sec. 20, Harry Hobbs, Steele 1, sw c ne ne sw, sd 3130 ft.

BRYAN COUNTY—T 6s, R 7e, Sec. 14, W. A. Johnson, Ussery 1, se c, sd 325 ft. T 6s, R 9e, Sec. 35, O. P. Bush, Commerce Trust Co., ne c, sd 600 ft.

EAST TEXAS

CASS COUNTY—Phillips Pet. Co.'s Olds 1, J. A. Stephenson sur, mov in rig.

HARRISON COUNTY — Shell Rock Pet. Co.'s Daugherty 1, W. W. Burris sur, m on junk 3445 ft.

MARION COUNTY—A. A. Trammell, Tr.'s, Hussey 1, Lockhart sur, 10-inch cas 60 ft, dr 78 ft. W. D. Chew's Fee 1, Wm. J. Hamilton sur, dr hd shale 2055 ft.

PANOLA COUNTY—Knott et al's Marion Durham 1, Chas. Haley sur, 10-inch cas 40 ft, sd 1690 ft (formerly carried in Shelby County).

SABINE COUNTY—Loring Oil Co.'s Nona Lbr. Co. 1, Jas. Mason sur, dk.

SHELBY COUNTY—Chapparral Oil Co.'s Holt 2, Matthew Moore sur, sd 3300 ft. Loring Oil Co.'s McCann 1, Nancy Beattie sur, dr hd lime 5350 ft.

SOUTH TEXAS

ATASCOSA COUNTY—Blue Bonnet Pet. Co.'s E. W. Tutsckke 14, W. Farquhar sur, lcn. Frontier Oil Co.'s Boynton 1, M. Flores sur, sd 17 ft in Buda, td 2737 ft, reported running 160 ft low; Boynton 2, John Sharp sur, ru. American Central O&G Co.'s McConnell 2, W. M. C. Baker sur, sd at 400 ft. Nute, Walker & Derden's J. B. Young 1, Williams Moore sur, no report.

BEXAR COUNTY—Boling & Michael's J. P. Adam 1, M. Gotaire sur, lcn. Eckert & Son, Sandemer 7, Menchaca sur, No. 52, lcn. K. M. S. Pet. Co.'s E. Salicky 1. Blk 16, Mission Carden sur, lcn. Moore & Juar's Ellison 1, 14 mi w of San Antonio, no report. Penn-Tex Oil Co.'s Sandemer 3, Menchaca sur, No. 52, prep to sp. J. Morgan Russell's Mills 1, Angel Navarro sur, dr about 700 ft; Strong 1, A. Navarro sur, dr 200 ft. Swearingen Oil Co.'s Fee 5, J. Perego sur No. 52, prod 10 bbls about 665 ft; Fee 6, 600 ft s and w of No. 1, dr about 225 ft. Henry Yelvington's (formerly Swift and Fisher) Beck 1, 10 mi w of San Antonio, to set csg below 1400 ft, showing of gas, sd at present. W. M. Morgan et al's Bloodgood 1, 1200 ft from n line, 150 ft from sw line of the 60 acre tract in sec 142-S Villa Perido, dr. McElreath and Suggest's Stephens 1, P. Hays sur, dr 865 ft.

BEE COUNTY—Barnsdall Oil Co.'s Roberts 1, 300 ft nw corner, near Cosden-McKinney, set 6⅝ in csg at 3645 ft, prod 190 bbls first 12 hrs, td 3653 ft. Baxter Prod. Co.'s Barnett Heirs 1, John Pace sur, ru. Christmas tree, 3629 csg, line 31 to 34, main cap 34-35. Cosden Oil Co.'s McKinney 2, John Pace sur, swabbing, csg set 3628 ft, on top of cap; McKinney 3, 500 ft w of No. 1, set 6⅝ in csg at 3648 ft, dst at 3648-55 ft, show gal oil and 40 ft mud in 9 minutes, lins 51-54 ft, cap 54-55 ft. Glasscock Bros.' Pettus Town 2, blk 24, spud in. Grayburg Oil Co.'s Kimball 2, set 880 ft 10-inch; Copeland 1, dr 250 ft. Humble's McKinney 5, s offset to Houston-Beasley-town well, spud in. Houston Oil Co.'s Newman 1, G. A. Kerr sur, csg at 3675 ft, waiting to dr plug; Pettus Town 2, blk 21, lcn; Pettus Town 3, blk 23, dk; Pettus Town 4, blk 33, ru; Pettus Town 5, blk 35, ru. Geo. A. Henshaw et al's Beck 1, 1 mi ne of Hicks gasser, top Jackson 2875 ft, now dr 3900 ft. Edwin Jones Rapp 1, Uranga sur, plug from 6062 to gas sand at 3094-3118 ft. Lange and Mimms' Billingsley 1, Grayburg-Kimball area, set 378 ft 10 in csg. Nichols et al's Hicks 4, Jose Maria Uranga sur, core below 3650 ft, 3606-43 dst, small show oil. Arkansas Natural Gas Co.'s Kimball 1, Stephen Winship sur No. 329, ru. Osage Oil Co.'s A. J. Mauldin 1, Pointevent sur, lcn. Hicks & Young's (formerly Gene Patton et al), Billingsley 1, B. Q. Hadley sur, sp and sd for fuel. Ed Price's Weiss 1, 2640 ft out of n corner of tract, dst at 4857 ft to 4862 ft, 160 ft of mud. Rio Bravo Oil Co.'s SA&AP 2, right of way 350 ft s of se corner, 6-A Kerr sur, townsite, lcn; SA&AP 4, 390 ft n of No. 3, permit granted; SA&AP 5, n of No. 40, permit granted; SA&AP6, 326 ft n of No. 5, permit granted; SA&AP 7, 544 ft n of No. 6, dr 2600 ft; SA&AP 8, 435 ft n of No. 7, permit granted; SA&AP 9, 435 ft n of No. 8, permit granted; SA&AP 10, 200 ft from w line and 140 ft from s line, permit granted; SA&AP 11, 140 ft from s and 150 ft from ne line, permit granted; SA&AP 12, 70 ft from w line and 200 ft from s line, permit granted; SA&AP 13, 700 ft from s of No. 14, permit granted; SA&AP 15, 750 ft n of No. 14, permit granted; SA&AP 16, 871 ft n of No. 15, permit granted. Swift et al's Mauldine 1, J. Pintecant sur No. 1, set 190 ft of 10-inch csg. T. B. Slick's Hodges and Mary E. Mitchell 1, center Pettus Townsite, blk 37, set 6⅝-inch cas at 3896 ft, sand 3897-3903 ft; Alfred Theis 1, 1 mi ne of Cadiz, 2700 ft from n and 300 ft from w line of 782 acre tract, ru. Southern Crude Oil Co.'s Dahl 1, Mana Dahl tract, sd 3120 ft. Texas Co.'s Scott 2, J. M. Urango sur, lcn. Union Prod. Co.'s Ray 10, R. G. Millican sur, dr 450 ft; Ray 13, Geo. Habmer sur, dk; Ray 15, e offset to Beasley, dr 3010 ft; Ray 16, 150 ft E. Pettus townsite, blk 41, dr 1450 ft. Buchanan et al's (formerly H. H. Weinert's) Pettus Townsite 1, blk 38, dr 2980 ft. Simms Oil Co.'s Holzmark 1, James A. York sur No. 333 ru. B. J. Meek's & Anderson's E. W. Walker -, ne cor of Noel Nixon survey No. 23, dr 250 ft. Adams and Lysles' Leeders 1, 150 ft from s and 1420 ft from e line of James Standford sur 29. C. L. McCreary's Miers 1, Scherling subdivision, spd. H. Sitton's McMillen 1, 2 miles w of Blanco, spud in.

BROOKS COUNTY — Houston Oil Co.'s Holbein-Wormser 2, Palo Blanco de Maguellas grant, set 312 ft of 12½-inch casing, now dr 2000 ft. Humble's Singer 2, Sec. 312, loc mi s Lasater field, dr 3440 ft.

CALDWELL COUNTY—Humble's New 5, being completed, csg set at 2205 ft on crevice. W. E. Allan's McKean 2, dk. Caldwell and Lanier's Byler 1, 6 mi s of Blanco City, sp in. Herb Morgan's Perry 2, abt ½ mi n of Humble-New gusher, prep to move on. Al Buchanan's Brown 2, C. M. Cannon sur, abt 40 ft surface pipe.

DUVAL COUNTY — Callahan, Howard & Smith's Luby 1, Sur 24, dr 3592 ft. Humble's Koehler 47, csg set at 1756 ft. Henne & Winche's (W. E. May) R. Benavides 1, M.

Ariske sur, dr 2805 ft. Larco Gas & Pet. Co.'s Black-Beall 1, nw part of county, lcn. Mag. Pet. Co.'s Lunsdell 1, dr 5085 ft; Schoolfield & O'Byrne 1, dr 4765 ft; Hahl 1, Sec. 61, Pointevent sur, lcn. Putman & Walsh's Hadgist 1, sur 2694, made 2 dr stem tests, show oil first at 2160 ft, second 2180-87 ft, dr deeper. Southern Oil Co.'s Welder-Woods 2, 12 mi ne of producer, dr 1500 ft. M. I. Shaw's Benavides 2, lcn.

FAYETTE COUNTY—Heffer-Stanton's M. E. Manton 1, W. H. Taylor sur, abt 3 mi nw of La Grange, dr, no report on depth. Kelly et al's Mirks 1, dr 1700 ft. Moore et al's Kerr 1, sdtr at 2000 ft.

GONZALES COUNTY — Lake & Thompson's Campbell 1, Saturn area, dr. Linden Pet. Co.'s Hensley 1, James Smith sur, sp in. Sterne & Terrell's F. Ramzinsky 1, 1350 ft from n and 614 ft from w line of 230-acre tract, ru. John Mauldin's (Finnell and Elam) Robinson 1, dr 2900 ft.

GOLIAD COUNTY—H. E. Hewitt's Geo. Ray 1, Bee sur 27, swabbing and head of gas water and gas, top of sand 4086 ft, td 4091 ft. Morgan-Tidal et al's Peirrie 1, V. Ramos sur, dr 6004 ft. A. G. Rheimenschneider, Trustee's, A. T. Fromme 1, Peter Dexter sur, dr 1300 ft. Union Prod. Co.'s Ray 12, 300 ft from se line, 600 ft from sw line of W. E. Sutherland sur, dr 2150 ft.

GUADALUPE COUNTY—Cranfill Reynolds' C. Wilson 1, J. Cantu sur, no report. Adams & Lyles' Denman 1, Wm. Arrington sur, sd 2815 ft, top of chalk 2445 ft, top of Edwards 2780 ft. Louis Neis' Otto Voges 1, Josefa Leal sur, lcn. Gulf's McLear 2, dr 2547 ft in Edwards. Hines, Browns & Davenport's Atzger 1, dr 2070 ft in chalk.

JIM HOGG COUNTY—Pippin & Mussey's N. Hinnant 1, CB&NG sur 300-A tract, lcn.

KARNES COUNTY—Maudine Invest Co.'s A. D. Wilburn 1, Hardt sur, D&A 4015 ft. Moody Seagraves Prod Co.'s Boyce 1, W. E. & Sallie Boyce lease, dr 4500 ft. Morrissey & Edminston's T. H. Ragsdale 1, John McCall sur, sd 1353 ft top of Jackson 1028 ft.

KENDALL COUNTY — C. R. Dutton's Hawhorn 1, 2475 ft from e line and 1488 ft from s line of 696 J. Lawhorn Sec. 10, dr 485 ft. Borget et al's Wallie Haag 1, dr 875 ft. Dixon et al's Behr 1, 3 mi se Sisterdale, dr 1935 ft. Molwinkle et al's Karston 1, west of Kendalia, dr 900 ft. P. S. Sterling's McCrocklin 1, C. B. Owen sur, dr 850 ft. W. B. Sitton's Garvin 1, fsh 775 ft.

KERR COUNTY—Dalgish James et al's Sid Peterson 1, between Kerrville and Rock Springs contract signed for test. Mashe & Trunstill's Jeff Love 1, western Kerr County, sur 1594, set casing 469 ft, dr 580 ft.

KINNEY COUNTY—Blume et al's Herbst 2, Poindexter Burns sur, dr, no rept depth. Mag. Pet. Co.'s Wardlow 1, Blaez sur, dr 2650 ft.

LIVE OAK COUNTY—Houston Oil Co.'s Booth 1, install heavy rig to run pipe, dst 5252-57 ft, 300 ft 48 gravity oil in 12 mins. Cartwright 22, dr 3000 ft. Larco Gas & Pet. Co.'s Wallace D. Wade 1, 5 mi n and e of Sandaria, on 10,000 acre blk in Live Oak and Jim Wells, lcn.

MAVERICK COUNTY—Rycade's Chittim 5, Sec. 129, dr 4205 ft; Sullivan 5, Sec. 82, dr 6625 ft; Chittim 6, Sec. 416, dr 3240 ft.

McMULLEN COUNTY—N. Coquat's Wm. Fahler 1, George Pickett sur, dr 750 ft.

MEDINA COUNTY—Kirby Pet. Co.'s Fusselman 1, Sec. 206, Castro sur, sd at 1950 ft. National Oil Co.'s Howard 1, John George sur, dr 1320 ft. Pearson Oil Co.'s Irrigation Gardens 6, Ison Palmer sur, sd at 1000 ft, top Serpentine at 885 ft. Pan-American Dev. Co.'s Hardt 1, casing set at 1107 ft, dr at 1300 ft. Sun Oil Co.'s William Edgar 1, S. Buell sur, dr 1085 ft in chalk. Sunflower Oil Co. Corp.'s Mofield 1, J. Brothag sur, pumping at total depth of 946 ft, making 5 bbls, great deal of water. Lynko O&G Co.'s Irrigated Farms 1, S. A. Trust Co. sur, no report. Calco Pet. Co.'s Crawford 1, sur No. 478, dr 905 ft; Donaldson 1, sur No. 25, dr about 170 ft. Witherspoon Oil Co.'s Adams 1, Adams gas field, total depth 2092 ft, topped Edwards at 2080 ft, formation dry.

NUECES COUNTY — Grimm & Yakey's Land Ranch 1, 7½ mi ne of Agua Dulce field, lcn. Houston Oil Co.'s M. E. Brooks 1, Los Sauces grant, dr 4620 ft. Independent O&G Co.'s C. Russell Farms 1, 2½ mi w of Corpus Christi, dk. Saxet O&G Co.'s (Pearson et al) Donigan 2, 6 mi w of Corpus Christi, dk; Dunn 6, 500 feet s of No. 5 in Saxet field, install heavy rig, td 3500 ft. R. A. Thomson, Trustee's, Lawrence-Harral 2, H. B. Sheppard farms subdivision, ru. South Texas Prod. Co.'s Danderman 1, Agua Dulce field, dr 2780 ft.

SAN PATRICIO COUNTY — Cosden O1 Co. et al's John Schmaltsteis 1, Sec. 9, 6 mi s Sinton, dr. Jacob, Bussini & Pickett's J. C. & Bobby Baldwin 1, ½ mi e of Sinton, rh around 3815 ft.

STARR COUNTY—Kusk Exploration Co.'s Kelsey 1, J. B. Villareal sur, dr 300 ft. I. V. McLean's 1, porcion 81, lcn. Mrs. J. L. Smith's Welch 1, dr below 900 ft.

VICTORIA COUNTY—Attee Dr. Co.'s J. C. West 1, dr 1720 ft. Lion O&R Co.'s McFadden 2, M. Trevino sur, set 12½-inch csg at 1005 ft, to rd July 20. The Texas Co.'s McFadden 1, Hannibal Bonney sur, set 13¾ csg 1087 ft.

WEBB COUNTY—E. H. Buckner's Benavides 1-A, Sec. 14, blk 5, Arispe Grant, dk; Elliott 1, Sec. 815, abt 950 ft from n and 2231 ft from e line, lcn. Claggett and Evans' Webster 1, being completed, estimated at 150 bbls daily in 3000 ft sand. J. L. Elliott's Esperanza Land and Livestock Co. 1, Sec. 815, 14 mi w and little n of Encinal, skidded dk to No. 2.. Esperanza Land and Livestock Co. 2, Sec. 815, 12 mi w of Encinal, ru. French Oil Co.'s R. Benavides 1-B, Sec. 661, prod 75 bbls, csg set 2348 ft, td 2357 ft. Sun Oil Co.'s Yeager-Stroman 14, Albercas Pool, 25 bbls, csg set 2168 ft, td 2175 ft. O. W. Killam's Bruni 19, lcn; Bruni 12, blk 22, Albercas Grant, dr below 3100 ft; Bruni 1, Sec. 1 of Billings ranch, dr 1800 ft; Bruni 2, blk 33, set csg at 2841 ft; Billingsley 8, sd at 2607 ft; Webster 6, Survey 684, Usher Carson lease, dr 2100 ft; Bruni 5, set csg 2847 ft, td 2855 ft, good showing of gas. Mag. Pet. Co.'s Benavides 3-A, SK&K sur, prod 40 bbls, csg set 2342 ft, td 2347 ft; Benavides 4C, prod 85 bbls, csg set 2344 ft, td 2349 ft. South Texas Prod. Co.'s S. Benavides 1, s section of Cole field, dr 500 ft; Benavides 2, Humble lease, se part Cole field, dr 2395 ft. Washington-Texas O&G Co.'s R. O. Benavides 1, blk 16, Sec. 268, dk.

WILSON COUNTY—Transcontinental Oil Co. et al's Bain 1, Neal F. Roberts sur, dr 440 ft, top chalk at 420 ft.

ZAPATA COUNTY—Allied Gas Co.'s Trevino 7-A, coring 1234 ft; Trevino 8-A, dr 800 ft; Trevino 9-A, dk; Trevino 6-A, prod 400 bbls csg set 1230 ft, td 1246 ft; Trevino 5-A, prod 150 bbls, csg set 1246 ft, td 1249 ft; A. Trevino 3-A, replacement hole for No. 3-A, prod 125 bbls, csg set 1243 ft, td 1250 ft. Arnold & Ahler, (Wicker et al) Garza 2, offset to Fansler 1, sub-div Garza lands, Comita grant, coring 1220 ft. Alamo Drlg & Leasing Co.'s Trevino 3, set cas 1236 ft; Trevino 2, Claggett lease, csg set 1232 ft, prod 100 bbls; Trevino 4, Blair lease, lcn; Trevino 3, Claggett lease, set csg 1220 ft. Blankenship et al's Garza 2, sd 1632 ft; Montemayor 1, sur 64, casing set 1277 ft, sand 1291 ft, prod 75 bbls; Montemayor 2, lcn. Edgington & Niles' Trevino 4, casing set 1230 ft, flowing 1000 bls; Trevino 3, blk 26, sec 412, casing set 1219 ft, standing full oil, running tubing; Trevino 2-B, dr in; Trevino 6, lcn. Keene & Jackson's Garza 1, lcn. Grimm & Yakey's Bustamente 1-C, Comita grant, dr stem test 1332 ft; Trevino 1, n part Muckleroy field, dk; Bustamente 2-C, lcn; Bustamente 1, Comitas grant, lcn; S. Bustamente 1, lcn. South Texas Prod. Co.'s F. Martinez 1, sur 6, dr 1651 ft. Henne & Winch's Jose Bustamente 1, dr 500 ft; Bustanmente 2, lcn. O. W. Killam's Cuellar 17-B, lcn; Cuellar 18, sd 2645 ft; Cuellar 22-B, dr 950 ft; Cuellar 20-C, dr 800 ft; Cuellar 24, set casing 1529 ft, td 1545 ft 100 bbls prod; Martinez 11-A, sur 120, dr 1948 ft; Martinez 2, Sec. 75, dr 300 ft. Keene & Jackson's Garza 1, 5 part Comitas grant, dr. Midwest Utilities' Garcia 1, Pedernal Grant, standing 1381 ft. Moore & Moore's Flores 1, no report, set surface casing 150 ft. B. F. Nixon's Guiterrez 1, Partition No. 10, Borrego Grant, dr 2000 ft. Nordan & Merris' Trevino 5-A, csg set 1240 ft; E. Guiterrez 2, lcn; Trevino 2-A, lcn; Trevino 1, Acklen lease, dr 400 ft; Trevino 4-A, csg set 1234 ft; Bustamente 1, prod 100 bbls, csg set 1232 ft, td 1247 ft. Palm City Oil Co.'s M. Guiterrez 4, C. Redondo sur, lcn. John Papas, Inc.'s, Flores 1, Porcion 350, dk. Penny Production Co.'s Trevino 1, standing 754-759 ft, showing of gas; Cuellar 1, dr 250 ft. Penn Tex Oil Co.'s P. Benavides 3, ru, laying water line. Slick et al's Escobas ranch 2, dr; Escobas ranch 3, no report. W. R. Shankle's Trevino 3, lcn; Guiterrez 2, prod 150 bbls csg, set 1240 ft, td 1259 ft. SRC Corp.'s Cuellar 6-B, csg set 1231 ft; Cuellar 7-B, dr 500 ft; Cuellar 8-B, dr 1100 ft; Cuellar 9-B, ru; Cuellar 10-B, dk; Cuellar 4-B, prod 125 bbls, csg set 1231 ft, td 1233 ft; Cuellar 5-B, dk; Trevino 2-A, prod 75 bbls, csg set 1224 ft, td 1260 ft; Cuellar 2-B, prod 150 bbls, csg set 1234 ft, td 1245 ft; Cuellar 3-B, prod 125 bbls, csg set 1228 ft, td 1246 ft; Trevino 5-B, sp in; Trevino 3-A, lcn. Trinity Drillers' Cuellar 1, ru; Trevino 2, lcn.

ZAVALLA COUNTY—Baldwin's Washer 1, 300 ft from s and e lines of sec 34, W. E. Erskin survey, dr 2300 ft. Anglin O&G Co.'s Pecan Plantation 1, 7 mi se of Uvalde, no report, gas sand at 560 ft; Pryor 5, dr 1000 ft. Cromwell et al's Whitecotton 1, dr. Cribbs and Davidson's Weatherby 1, near Loma Vista, dr 1700 ft. Texas Gas Fuel Co.'s West 7, dr around 1500 ft. Weigand Bros.' Gates 1, complete fsh job, td 2350 ft, re dr.

CENTRAL EAST TEXAS

Completions

Company, Well and Location	Initial Production Bbls.	Depth
NAVARRO COUNTY—		
Ed. Bateman Oil Corp,, McCowan 1	*	3247
VAN ZANDT COUNTY—		
Manley-Short-Sprinkle, B. C. Andrews 1	*	3711
WOOD COUNTY—		
Big Indian Oil & Dev. Co.-Tidal Oil Co., R. J. King 1	*	4544

BOWIE COUNTY—Lee Timberlake et al's J. Tidwell 1, Jas. Eskell sur, top Pecan chalk 1229 ft, dr 2305 ft.

CAMP COUNTY—McDonald Bros.-Atlantic Oil Prod. Co.'s B. D. Tillery 1, J. H. Murphy sur, lcn.

CASS COUNTY—Phillips Pet. Co.'s Olds 1, dk.

DELTA COUNTY—C. A. Everts et al's J. A. Smith 1, J. W. Renfro sur, rig. Delta County Dev. Co.'s M. F. Hays 1, J. B. Anderson sur, dr 2420 ft. Hazel-Curtis Oil Co.'s T. J. Irwin 1, B. Williams sur, dr 2215 ft.

ELLIS COUNTY—G. C. Foster & S. C. Richardson's Moise-Cerf 1, La Pena sur, elev 440 ft, sd 2187 ft. The Triangle Corp.'s W. B. Hale 1, B. Smith sur, Austin chalk at 78 to 437 ft, Woodbine sand 836-1120 ft, dr broken lime and shale 1735 ft.

FANNIN COUNTY—North American Pet. Co.'s Allen 1, W. A. Broadfoot sur, set cas 975 ft. Ed. V. Parsons et al's Morgan 1, J. E. English sur, elev 668 ft, cemt 8¼-in cas 3026 ft, dr plug with cable tools. E. M. Rogers et al's Mrs. E. C. McSwain 1, Juana Tolgade sur, lcn.

FRANKLIN COUNTY—Harper & Byers' A. J. Laws 1, D. G. Rogers sur, rig.

HENDERSON COUNTY—H. B. Ashburn et al's T. E. Terry 1, Arron York sur, elev 397 ft, sd 2510 ft. L. G. Bradstreet & Co.'s J. J. Shaughnessy 1, John Isard sur, sp and sd. E. L. Chapman et al's Cade 1, Simon Weiss sur, elev 340 ft, sd 3065 ft. Cranfill & Germany, Inc.'s C. C. Starr 1, G. Acosta sur, elev 434 ft, top Midway 977 ft, top Nacatosh 2010 ft, top Pecan chalk 2544 ft, dr 2700 ft. Geo. L. Pace et al's S. Anthony 1, J. M. Betram sur, elev 410 ft, rig. Sunray Oil Co.'s R. H. Davis 1, E. G. Harris sur, rig.

HUNT COUNTY—Fred B. Branson-C. A. Kelsey et al's J. S. West 1, Jas. Rhodes sur, Pecan chalk 1310-65 ft, top Austin chalk 1415 ft, dr 2510 ft.

KAUFMAN COUNTY—Otto R. Winter & Coastline Explorations, Inc.'s John Barrow 1, R. A. Terrell sur, dr 350 ft.

LIMESTONE COUNTY— Haley-Heemenns' Wilkes 1, J. Breeding sur, elev 421 ft, sd 1270 ft.

NAVARRO COUNTY—O. W. Killam & Phillips' L. N. Wilson 1, dr 700 ft. Navarro Oil Co.'s W. N. Matthews 2, A. J. & P. M. Smith sur, fsh 1450 ft. Wheelock & Collins' W. D. Castle 1, Abner Mathers sur, elev 337 ft, Austin chalk 2410-2802 ft, top sand 3220 ft, coring sand 3240 ft. Young et al's J. H.

Farmer 1, Robt. Finley sur, top Austin chalk 787 ft, dr 900 ft.

RAINS COUNTY—D. H. Byrd et al's J. D. Hill 1, F. McMahan sur, elev 425 ft, Pecan chalk 2348-2546 ft, top Austin chalk 3790 ft, sd to abn 4320 ft. Everett & Morrison's F. Franklin 1, John Christian sur, sp and sd.

RED RIVER COUNTY—E. L. Chapman et al's Morris-Guest 1, S. Lakin sur, dr 1414 ft.

RUSK COUNTY—E. M. Joiner et al's Bradford 3, elev 390 ft, Pecan chalk 2590-2744 ft, base Austin chalk 3480 ft, sd 3515 ft. Moss et al's Mathews 1, top Pecan chalk 2296 ft, sd 2330 ft.

SMITH COUNTY—E. L. Chapman et al's J. M. Hammon 1, Jas. Reid sur, elev 380 ft, Pecan chalk 2680-2912 ft, top Austin chalk 3900 ft, dr 4235 ft. McElreath & Suggett's J. Gillian 1, J. C. Robertson sur, sp and sd. Owen-Sloan Oil Co. & R. H. Davis' J. H. Starnes 1, J. W. Allen sur, elev 417 ft, dr 1525 ft. Winona Oil Co.'s Morgan Freeman 1, A. J. LaGrone sur, sd 1740 ft.

TITUS COUNTY—Deep Rock Oil Co. et al's State Bank 1, H. W. Cobb sur, elev 410 ft, Pecan chalk 2406-2927 ft, dr 4415 ft.

VAN ZANDT COUNTY—Bethel Oil Co.'s P. Smith 1, M. Neal sur, elev 435 ft, chalk 2555-2790 ft, co 3708 ft. E. L. Chapman et al's Chas. T. Wolverton 1, Wm. James sur, elev 555 ft, sd 2905 ft. Doc Cooper et al's Elliott 1, W. H. Bundy sur, rig. W. T. Daniel et al's F. Cumby 1, J. Wright sur, elev 457 ft, Pecan chalk 1690-1730 ft, sd 2275 ft. Harry Helms et al's C. E. Vague 1, dk. L. G. Priest et al's Blanche Blewett 1, E. Porter sur, elev 566 ft, sd 2008 ft. Texas Chief Oil & Royalty Co.'s J. P. Foster 1, F. Montgomery sur, dr 1270 ft. Vanco Oil Co.'s Wages 1, dk. Van Zandt Oil & Dev. Co.'s Sharp-Robinson 1, J. B. Ybarbo sur, elev 373 ft, top Pecan chalk 2764 ft, top Austin chalk 4116 ft, dr 4375 ft.

VAN FIELD—Broderick & Calvert's M. F. Shirley 1 (2.07-ac strip), dk. Hartt Pet. Co.'s L. L. Swain 1, dk. E. L. Chapman et al's Clark 1, dk. Humble O&R Co.'s J. A. Freeman 1, elev 510 ft, Pecan chalg 1749-1825 ft, Austin chalk 2614-2802 ft, showed oil 3012-14 tf, showed salt water in Woodbine 3064-72 ft, dr lime 3430 ft. Imperator Oil Corp. et al's Carter 1 (vacancy strip), lcn; G. J. Luther 1 (vacancy strip), showed little oil in Nacatosh sand test, td 1157 ft. Roy Jenkins et al's M. E. Davis 1, dk. Pure Oil Co.'s M. R. Bolin 3, dk; C. H. Cannon 3, rig; A. D. Clark 4, sd for water 321 ft; A. Crim 1, missed oil and gas horizon, reaming hole at 3382 ft for deep test; J. F. Crim 1 (40-ac), sd for water 313 ft; V. T. Davis 1, dk; W. T. Jarman 1 (discovery well), co to deepen from 2710 ft; Jarman 5, rig; J. T. Leonard 2, completing as pumper, td 2938 ft; Methodist Church lot 1, lcn; M. L. McMahon 1, lcn; J. J. Murphree 3, lcn; H. R. Peters 2, rig; M. F. Shirley 1, lcn; J. R. Shivers 1, dk; J. C. Stewart 2, cemt cas 2518 ft; W. F. Swain 1 (48-ac), rig; J. T. Thompson 7, sd for water 2621 ft; Thompson 8, dk; R. L. Wells 5, dk; Wells 8, sd for water 2591 ft; Wells 9, rig; Van Church lot 1, sd for water 2579 ft. Shell Pet. Corp.'s I. P. Tunnell 6, rig. Sun Oil Co.'s I. W. Thompson 3, dk; Thompson 4, sd for water 2390 ft. The Texas Co.'s Carter 1, dr 430 ft; R. A. Tunnell 2, sd for water 2709 ft; W. H. White 2 (35-ac), rig; W. H. White 1 (20-ac), sd for water 304 ft.

WEST TEXAS
Completions

Company, Well and Location		Production Bbls.	Depth
CULBERSON COUNTY—			
Grisham-Hunter Corp., W. D. Garren 1	*		2514
IRION COUNTY—			
J. B. Crawford et al, J. M. Nutt 1..	*		1105
REAGAN COUNTY—			
Westyde Inv. Co., J. H. Scott 1...	*		2853
TAYLOR COUNTY—			
Condor Pet. Co., Stokes 1	*		3658
WARD COUNTY—			
Tex-Oil Production Co., Redman 1-A	*		5077

ANDREWS COUNTY—Deep Rock Oil Co. et al's A. R. King 1, sd for storage, td 4454 ft; B. L. King-Miles 1, elev 3196 ft, top salt 1700 ft, sd making water 4765 ft; W. J. Mathis 1, elev 3193 ft, top salt 1730 ft, pb from sulphur water at 5088 ft. Fuhrman Pet. Corp.'s Ford 1, elev 3186 ft, making gas 3994-4002 ft, fsh 4011 ft. Humble-Penn & Atlantic's H. M. Wilson 1, elev 3347 ft, top salt 1685 ft, dr 4330 ft. Maer-Martin & Kell's Meadors 1, dr 700 ft.

BREWSTER COUNTY—Trans-Pecos O&G Co.'s Jones 1, elev 3073 ft, sd 2345 ft.

COKE COUNTY—Arkansas Fuel Oil Co.-Dixie Oil Co.'s Stepp 1, dr 3545 ft. Llpan Oil Co. et al's Rawlings 1, sd 3500 ft.

CONCHO COUNTY—Beesley et al's Waring 1, machine. A. W. Turner et al's Brosig 1, dr 1265 ft.

CRANE COUNTY—Cranfill & Gulf Prod. Co.'s Rubbs 1, elev 2526 ft, top salt 505 ft, top white lime 2445 ft, re-bldg burned dk, td 3993 ft. C. C. Duffey et al's Cowden 1-C, rig. Sun Oil Co.'s State Bank 1, dr 2025 ft.

CROCKETT COUNTY — California Co.'s Shannon 3, top salt 1105 ft, dr 1735 ft. Dolman & Moore's Perner 1, sp and sd. Magnolia Pet. Co.'s Hoover 1, elev 2412 ft, top salt 660 ft, top lime 1890 ft, sd 5420 ft; Hoover 2, machine. McMan & Amerada's Powell 2, lcn. G. Schaul et al's Barnscorew 1, machine.

CULBERSON COUNTY — Grisham-Hunter Corp.'s W. D. Garren 2, dr 705 ft. W. L. Kornrumpf et al's Garren 1, sd 845 ft.

ECTOR COUNTY — C. P. Davis et al's Hendrick 1, elev 2878 ft, top salt 1640 ft, sd 4012 ft. Penn Oil Co.'s Kloh 1, Sec. 19, dr 1410 ft. Penn & Devonian Oil Co.'s Goodman 1, top salt 1690 ft, dr 3715 ft. Skelly-Republic Prod. Co.'s McKenzie 1, top salt 1010 ft, top lime 3170 ft, sd for storage, td 3665-3750 ft. Southern Crude Oil Pur. Co.'s Cowden 1, elev 3047 ft, dr 2196 ft. Sunray-Llano Oil Co.'s Jones 1, pb from water at 3823 to 3817 ft and shot twice. H. F. Wurtz et al's Ibbetson 1, elev 2840 ft, top salt 865 ft, sd 2375 ft.

EDWARDS COUNTY—Phillips Pet. Co.'s Holman 2, fsh 3940 ft.

FISHER COUNTY—Cranfill-Reynolds Co.'s Barrett 1, dr 2510 ft; Flannigan 2, dr 1780 ft. Midwest Explo. Co.'s Decker 1, dr 2695 ft. Roeser-Pendleton, Inc.'s, Steele 1, ur 2675 ft. The Texas Co.'s Teagarden 1-A, dr 2775 ft.

GAINES COUNTY — Humble O&R Co.'s Carswell 1, elev 3413 ft, top salt 1775 ft, sd 4193 ft.

GARZA COUNTY—H. C. Cate-Mel Richards' Stoker 1, elev 2591 ft, top salt 935 ft, top lime 2365 ft, dr 3035 ft.

GLASSCOCK COUNTY—Ed. Timberlake et al's Meek 1, elev 2575 ft, top lime 2670 ft, fsh cas 2956 ft. World Oil Co.'s Edwards 1, elev 2538 ft, top lime 2650 ft, dr 2675 ft; McDowell 3-C, elev 2537 ft, dr 650 ft.

TOM GREEN COUNTY—Mintex Oil Co.'s H. C. Campbell 1, dr 390 ft. Phillips Pet. Co. et al's Jennings-Gulden 1, fsh 3275 ft.

HOWARD COUNTY—Meriwether Oil Co.'s Smith 1, elev 2590 ft, sd 2765 ft. Owen-Sloan Oil Co. et al's Flowers 1, elev 2517 ft, sd hfw 3675 ft.

HUDSPETH COUNTY — California Co.'s University 1, elev 5109 ft, dr 4825 ft. Rio Bravo Oil Co.'s S. P. Ry. Fee 1, temp abn jkd hole 1400 ft.

IRION COUNTY—Carl Cromwell's Tankersley 1, fsh 940 ft; Tankersley 2, dr 1540 ft. Straughan & Texannati Oil Co.'s Nutt 3, dr 360 ft. F. E. Webb et al's Nutt 1, lcn. P. H. Williams et al's Ashe 1, sd 8900 ft; Noelke 1, machine.

JONES COUNTY—Gibson-Johnson et al's Hudspeth 1, swab 50 bbls oil and 25 bbls water 2542-43 ft. Shaheen & Prairie O&G Co.'s King 1, sd 1690 ft.

LOVING COUNTY—California Co.'s Reagan 2, dr 1065 ft; Reagan 3, cem cas 625 ft; Reagan 4, sp. Dixie Oil Co.-Phillips Pet. Co.'s Johnson 1, elev 2819 ft, top salt 992 ft, dr 3790 ft. A. R. Eppenauer Drlg. Co. & Young's Allen 1, rig. Geo. A. Henshaw et al's Reagan-McElvain 1, dk; Russell 2, top salt 755 ft, dr 3910 ft. L. E. Lockhart et al's Wheat-Ramsey 1, dr 1250 ft. Lockhart & Co.'s Bowen-Wells 3, sd 3385 ft; Hubbard 6, rig; Lepp 2, sp and sd. Miller-Burge-Healey's Chapman 1, ur 700 ft. Joe Rush et al's Jim Wheat 1, dr 565 ft. Lee O. White et al's Russell 1, dr 180 ft.

LYNN COUNTY—Geo. McCamey-Hart Oil Corp.'s Edwards 1, dr 5210 ft.

MENARD COUNTY—W. C. Barnett et al's Callan 3, sd 835 ft. Jas. L. Duffy & Panhandle Ref. Co.'s Eckhardt 2, dr 2710 ft. L. G. Priest et al's Sorrells 1, elev 2279 ft, fsh bit 2415 ft.

PECOS COUNTY—Barnes et al's W. A. Sanford 1, sd 220 ft. Black-Doran & McGee's Pecos Valley 1, sd 1215 ft. California Co.'s E. J. Fromme 1, dr 1530 ft. E. L. Chapman et al's Streety 1, elev 2653 ft, sd 2200 ft. Crosby Prod. & Roy. Co.'s Cordova 1, elev 2320 ft, top salt 725 ft, sd 2080 ft. Galt-Brown Co.'s Neville 1, ur 825 ft. Humble O&R Co.'s Kokernot 1, elev 3595 ft, dr 1815 ft; Thompson 1, fsh 249 ft. Hussman Oil Co.'s Estes 1, co 1680 ft. Independent O&G Co.'s McDonald 4, dr 970 ft. Independent & Buell-Hagan's Pecos Valley 1-A, sd making 2 mil ft gas 1545-47 ft. Magnolia Pet. Co.'s Byrne 1, rig. McCarty Oil Co.'s Gray 2, sd showing oil 1292 ft. J. R. Miller et al's Bennett 1, set cas 1640 ft. J. D. O'Mara et al's Bennett 1, sd 1230 ft. Oregon Oil Corp. et al's Yates 2, elev 2565 ft, top salt 710 ft, fsh cas 1953 ft. O. J. Perren et al's Eaton 2, sd 1323 ft; Jackson-Pure 1, dr 1365 ft. R. W. Porpus et al's State 1, sp and sd. Pure Oil Co.'s Harrison 1, dr 1005 ft. Sides & Cloyd's Blackstone-Slaughter 1, top salt 860 ft, sd 2065 ft. Transcontinental Oil Co.'s University 1, co 4918 ft. W. F. Walsh et al's Henderson 1, elev 3325 ft, dr 2720 ft. Rio Grande Oil Co. (was M. Warner), Webb 1, dk. R. D. Webb et al's Fee 3, cas 441 ft.

PRESIDIO COUNTY — Brite Prod. Co.'s L. C. Brite 4, elev 4536 ft, sd 2630 ft.

REAGAN COUNTY—Big Lake Oil Co.'s University 3-C, dr shale and broken lime 8724 ft University 4-C, jarring on tools, td 8220 ft; University 5-C, changing to rotary outfit, td 2400 ft; University 179, dr out cement 4003 ft. Kemrow Co. & W. C. Beesley's Sawyer 1-A, top salt 893 ft, top lime 2195 ft, dr 2635 ft.

REEVES COUNTY—California Co.'s Kloh 1, dr hfw 2580-2600 ft. May & Milton's J. B. Ellis 1, set cas 692 ft. Salsbury & Gregory's Bell 1, sd 260 ft. Slack & Fink's Brooks-Huling 1, elev 3116 ft, sd 1860 ft. Lee O. White et al's Mrs. Hersheusen 1, sd 3660 ft.

RUNNELS COUNTY — Boyce & Lamar's Lange 1, elev 1844 ft, sd 2643 ft. Chas. Dutton et al's G. W. Dean 1, dr 965 ft.

SCHLEICHER COUNTY—Delmar Oil Co.'s O'Harrow 1, ur 4060 ft. Phillips Pet. Co. et al's J. A. Whitten 1, elev 2333 ft, showing oil and gas at 6300-37 ft, sd 6842 ft. Munger-Wilson Oil Co.'s Page 1, elev 2270 ft, fsh 4912 ft. Paul Teas & Walter Gant's Allison 1, cem cas 2395 ft. J. D. Wesner et al's Nicks-Ratliff 1, sd 750 ft.

SCURRY COUNTY—J. G. Armand & Camp Springs O&R Co.'s Strayhorn 1, sd 470 ft; Quinn 1-A, elev 2316 ft, sd 4374 ft. D. H. Byrd & Harmon's Murphy 1, elev 2298 ft, fsh 3320 ft. Pender O&G Co.'s Davis 1, fsh 4665 ft. Transcontinental-Vacuum Oil Co.'s Peckham 1, elev 2155 ft, dr 2700 ft.

STERLING COUNTY—Fred Turner-Mann-Wohlford's Reed 1, dr 1435 ft.

TAYLOR COUNTY—W. G. Clark & Humble O&R Co.'s Kendall 1, dr 735 ft. Eastland Oil Co. et al's Hunter 1, rig. Gibson-Johnson et al's Bingham 1, bad hole 2412 ft. H. B. Herring-Hucony Gas Co. et al's Richie 1, sd 1080 ft. J. B. Jameson et al's Webb 1, elev 1905 ft, sd 6001 ft.

TERRELL COUNTY—Big Bend Oil Corp. et al's Bassett 1, elev 2396 ft, sd 2130 ft. Transcontinental Oil Co.'s Good 1, elev 2405 ft, bad hole 5200 ft.

TERRY COUNTY — Penn Oil Co. Unit Plan's P. Carlisle 1, elev 3275 ft, top salt 2260 ft, dr 4835 ft.

VAL VERDE COUNTY—O. O. Owens et al's Mills 1, dr 6395 ft. Phantom Oil Co.'s Ingram 1, sd 3110 ft.

WARD COUNTY — Atlantic & California Co.'s E. W. Thomas 1, rig. Atlantic & Penn Oil Co.'s Bennett 1-B, dr 1545 ft. Bradford et al's M. B. Murray 1, machine. Gulf Prod. Co.'s Hutchings 4, making 8 mil ft gas and fsh tools 2415-55 ft; Hutchings 5, dr 315 ft; O'Brien 9, elev 2655 ft, top salt 1025 ft, flowed 282 bbls oil 2572-2681 ft, pb from water at 2681-88, ft; O'Brien 10, top lime 2375 ft, dr with show oil and gas 2647 ft; O'Brien 11, top lime 2380 ft, dr 2630 ft; O'Brien 12, top lime 2325 ft, dr 2585 ft. Magnolia Pet. Co.'s Geo. Sealy 1, sp. R. F. Owen et al's H. W. Johnson 1, sd 600 ft. Sid Richardson et al's O'Brien 3, flowed 115 bbls 14½ hrs. via tubing 2558-2750 ft. Shipley Oil Corp.'s Monroe 1-A, dr

1700 ft. J. E. Smith et al's Clements 1, elev 2439 ft, top salt 745 ft, sd 2230 ft.

WINKLER COUNTY—Atlantic & Joe Maxwell's L. Daugherty 1, dr 375 ft. Champion-Winkler Oil Corp.'s Campbell 1, sd 4036 ft. Simms Oil Co. & Atlantic's Sealy 1, dr 1150 ft. Jeffrey et al's Brown 2, coring 3060 ft.

TEXAS GULF COAST

Completion

Company, Well and Location	Production Bbls.	Depth
AUSTIN COUNTY—		
Black Hawk Oil Co., Lancashire 1, 3 mi s Sealey	*	4250

AUSTIN COUNTY—J. T. O'Hara et al's Batla 1, 8 mi nw Raccoon City, sd 4000 ft. Black Hawk Oil Co.'s Lancashire 1, 3 mi s Sealey, abn at 4250 ft.

BRAZORIA COUNTY—Thos. Faust et al's Fee 6, 2 mi s Nash dome, dr 4375 ft lime and shale. Shell's Blakely-Winston 3, Danbury, dr 1619 ft sand and shale, oil show. Rycade & Amerada's Rapid City 1, 2 mi s Danbury, dr 5720 ft gbo. Rycade's Wisdom 27, Nash, set cas at 1200 ft. Rycade & Vacuum's Wisdom 1, Lake Jackson, lcn. Rycade & Amerada's Seaburn 1, Stratton Ridge, ru. Freeport Sulphur Co.'s Fee 2001, Bryan Mound, dr 1775 ft gbo. Rucks & Patterson's Hunter 1, sw Hoskins Mound, sd 1180 ft. The Texas Co.'s Ewing 1, 1½ mi n Manvel, dr 5900 ft shale. Mills Bennett's Reese 1, Allen dome, dr 1800 ft sand and shale; Poole 1, lcn. United Oil Synd.'s Mores 1, 3 mi n Danbury, dr 1441 ft shale.

CALHOUN COUNTY — The Texas Co.'s Thomas 1, Chocolate Creek district, 6 mi w Port Lavaca, dr 2215 ft.

CHAMBERS COUNTY — Pure's Mayes 11, Lost Lake, cor 2675 ft; Mayes 11-A, dk; Lost Lake 5, dr 859 ft gbo. Pure's Kirby 1, Cove, dr 6605 ft sand and shale. Pure-Rycade's Jackson 1, Oyster Bayou, 6 mi w High Island, fsh 3975 ft. Shell's Herff 1, Moss Bluff, sdtr 5475 ft. Superior Oil Co.'s H. Jackson 1, 5 mi w High Island, sd 3860 ft. The Texas Co.'s Jackson 1, Salt Cedars, dr 2910 ft gbo. Chicago Oil Corp.'s Lawrence 1, 10 mi s Barbers Hill, sd 3810 ft.

COLORADO COUNTY — Gulf, Humble & Penn's Hugh Wilson 1, ½ mi e Alleyton, dr 4225 ft shale.

GRIMES COUNTY—Cranfill-Reynolds Co.'s Stoneham 1, 8 mi se Navasota, dr 2850 ft shale. Deering & Noble's Templeman 1, 6 mi s Navasota, dr 1850 ft shale.

HARDIN COUNTY—D. O. Speights' Gidrey 1, 4 mi s Batson, dr 2475 ft.

HARRIS COUNTY—Humble's Simms-Smith 78, Goose Creek, dr 2741 ft sand rock. Humble's Warren 7, Hockley, pulled in dk while drilling at 7063 ft, shale; Minnetex 3, Mykawa, set cas 1345 ft. Mrs. J. C. Baldwin's Kitzman 1, 2 mi n Cypress, sd 4247 ft. Sloane Prospecting Co.'s Davis 1, 5 mi nw Barbers Hill, abn at 6408 ft in sandy shale.

JACKSON COUNTY — The Texas Co.'s Mitchell 1, Lolita, 12 mi s Edna, dr 5669 ft shale. Jackson Co. Oil Synd.'s Drushell 8, Edna, dr 3310 ft shale.

JEFFERSON COUNTY — Westbury Oil Co.'s West 1, S. Choate sur, dr 3500 ft gbo. Gulf's Junker A2, Fannett, dr 4210 ft sand. The Texas Co.'s Pipkin 3, Big Hill, dr 1670 ft cap rock.

LIBERTY COUNTY — Humble's Sabine Tram 1, Devers, dr 5775 ft shale. Houtex Prod. Co.'s Deering-Wilhite 2, N. Dayton, dr 5200 ft sandy shale; Mattie R. Davis 1, North Dayton, dr 3735 ft. Gulf's Boyt 7, Hankamer, Dayton, dr 3733 ft. Gulf's Boyt 7, Hankamer, dr 4100 ft shale; Boyt 8 dr 3805 ft sand; Ezzell 1, Hankamer, dr 2650 ft sand. Cranfill-Reynold's Co.'s Vajdak 1, e side Esperson, will deepen from 7386 ft; Moores Bluff B-1, 2 mi se Esperson field, dr 1640 ft gbo. Yount-Lee's Moores Bluff 3, Esperson, dr 6960 ft sandy shale. Republic Prod. Co.'s Moores Bluff 1, ne Esperson field, abn at 5100 ft in shale.

MATAGORDA COUNTY—Watts Oil Co.'s Titus 1, s College Port, abn at 3505 ft in sandy shale. Empire's Boker 1, Citrus Grove, lcn.

MONTGOMERY COUNTY—Kelly Baker's Juergus 2, 3 mi Conroe, sd 1910 ft.

ORANGE COUNTY—Gulf's W. H. Stark 1, Port Neches, dr 4775 ft sand and shale. The Texas Co.'s Kuhn 2, Port Neches, tested gas through dr stem at 4400 ft; Stark 2, Port Neches, dr 4590 ft sandy shale, oil show.

WALKER COUNTY — Richardson et al's Smither 1, 12 mi n Huntsville, sd 3455 ft. Texas State Oil Co.'s Fails 1, nw Huntsville, sd 1800 ft.

WALLER COUNTY—Kirby Pet. Co.'s Rogers 2, San Felipe, dr 1050 ft.

WASHINGTON COUNTY — W. B. Birdwell's Schram 1, 3 mi e Brenham, sd 2105 ft. Clifton et al's Pruiss 1, 3 mi sw Brenham, dr 1603 ft shale.

WHARTON COUNTY—C. S. Thomas' Taylor 1, Boling, dr 975 ft sandy shale; Volny 1, sd 235 ft.

SOUTH LOUISIANA

ACADIA PARISH—The Texas Co.'s Rayne Heirs 5, Evangeline, s flank, dr 8475 ft sandy shale. Yount-Lee Oil Co.'s Houssiere-Latrielle 9, Evangeline, se side, dr 3050 ft sand.

ASSUMPTION PARISH—Poor Boy Drlg. Co.'s La Barre Est. 1, Napoleonville, dr 500 ft sand and gravel.

AVOYELLES PARISH — R. A. Tippett's Chatalin 1, 5-1n-3e, sd 3400 ft.

CAMERON PARISH—Pure's Yount-Lee 9, Sweet Lake, dr 6750 ft sand and shale. Magnolia's Sweet Lake 1, dr 3900 ft gbo. Shell's Watkins 15, Black Bayou, driving piling; Black Bayou State 1, ru. Vacuum's Cameron Meadows 1, e Johnson Bayou, fsh 3953 ft. The Texas Co.'s State E. Hackberry 7, ru; Calcasieu Lake State A-6, dk.

IBERIA PARISH—The Texas Co.'s State Vermilion Bay 5, dr 3530 ft rock. Jefferson Lake Oil Co.'s Lake Peigneur 7, Jefferson Island, lcn. Lake Oil Co.'s Ben White 1, 54-12s-7e, dr 2015 ft sandy shale.

IBERVILLE PARISH—Standard's Schwing 5, Bayou Blue, dr 2300 ft sand Wilbert 5, Bayou Blue, dr 2900 ft sandy shale; Wilbert 7, dk; Wilbert 8, dr 1000 ft sand and gravel; L. Baist Cooperage Co. 1, Bayou Blue, capped piling; E. B. & S. P. Schwing 1, capped piling. Shell's Wilbert 5, White Castle, ru.

JEFFERSON PARISH—Humble's Delaware Fur Co. 1, 3 mi nw Lafitte, dr 1900 ft sand.

LAFAYETTE PARISH—Pure's J. Manmotin 1, 5 mi n Lafayette, dr 3930 ft gbo.

LA FOURCHE PARISH—The Texas Co.'s LL & E-Leeville 1, td 5275 ft.

PLAQUEMINES PARISH—Humble's Cockrell-Moran 2, Lake Grande Ecaille, lcn; Cockrell-Moran 3, dr 1450 ft sticky shale; Lake Washington 1, Lake Grande Ecaille, td 5150 ft, will dr deeper. The Texas Co.'s Garden Island Bay State 4, dr 720 ft gbo.

ST. LANDRY PARISH—Pure's J. A. Perkins 1, Port Barre, dr 1750 ft sand. Hebert-Baker Oil Co.'s Fisher 1, 10-3s-4e, sd 4375 ft. Alex Rice's Futral 1, Port Barre, dr 4550 ft. The Texas Co.'s Botany Bay 8, Port Barre, dr 3340 ft sand showing oil.

ST. MARTIN PARISH—The Texas Co.'s St. Martin Ld. Co. 3, hit salt 2650 ft, plugged back to 2625 ft to test. Yount-Lee's Hebert 2, Anse La Butte, dr 5225 ft dr sand and shale at 5225 ft. Rycade-Humble's Bayou Bouillon 10-B, Bayou Bouillon, dr 4250 ft sticky shale; Woodyard Lake 1, Bayou Bouillon, dr 4726 ft.

ST. MARY PARISH — Pure's Wax Lake State 2, 11-17s-9e, abandoned at 5900 ft in sticky shale. The Texas Co.'s South Coast Co. 1, 4 mi n Franklin, dr 5925 ft sticky shale. La. Ld. & Explo. Co.'s Chas. W. Fox 1, Avoca, dr 1050 ft gbo.

TERREBONNE PARISH — Chas. Paggi's Evergreen 2, Houma, sd 1800 ft. Freeport Sulphur Co.'s Nelson 1, sd 3785 ft. The Texas Co.'s Bay Junop 2, lcn; Dog Lake A-3, lcn; Caillou Island 3, dr 100 ft; 4, lcn; 5, lcn; Lake Pelto B-2, ru steam rig, td 2160 ft; Lake Pelto 4, lcn; 5, lcn; 6, lcn; Bay St. Elaine 4, dr 5450 ft shale and lime; Lake Barre State 4, set cas at 3640 ft; 5, capped piling; 6, lcn; Four Isle 4, ru.

MOUNTAIN STATES

COLORADO

ADAMS—N. M. Slatt, 1, se 27-25-64w, stand 1900 ft.

ARAPAHOE—McDebb Dr. Co.'s Fitzsimmons 1, 7-45-66, prep to run 43/4-in to 5692 ft.

ARCHULETA—Outwest Inv. Co.'s Fitzhugh 1, se 34-33n-1e, dr 124 ft.

BACA — A. R. Jones & Optg. Co.'s Boice Cattle 1, 22-34s-42w, dr 1035 ft.

BENT—Continental's Pipe Springs 1, se 27-27-49, sd 6075 ft.

BOULDER—Reliance Oil Co.'s Erickson 1, nw 33-2n-70w, dr 3145 ft.

DELTA—Crawford O&G Co.'s McKissen 1, ne 28-15s-91w, stand 1100 ft.

DOLORES—Transcontinental's Glade 1, nw 30-41n-16w, dr 6375 ft.

DOUGLAS—Perry Park Oil Co.'s Cannon 1, nw 11-9s-69w, dr 600 ft.

EL PASO—Utemore Syndicate's Carson 2, ne 10-16s-66w, dr 800 ft.

FREMONT—Westerville Oil Co.'s State 1, nw 16-18-69, sd 1214 ft. Hammond & Roscoe's Beltrame 1, se 1-9s-70, sd 1800 ft.

GARFIELD—Fulton Pete. Co.'s Permit 1, ne 8-8s-102w, rigged up.

JACKSON — Midwest Refining Co.'s Rich 21-X, nw 9-6n-80w, dr 4375 ft. P&R Hendershot 1, ne 2-6n-81, dr 4136 ft.

JEFFERSON—Ruby Hill O&G Co.'s Braden 1, se 24-4s-59w, co 3568 ft.

HUERFANO — Parker Club and Kinney-Coastal, Fee 1, se 4-28s-69w, fsg cas 4116 ft. Elliott et al.'s Abeyeta 1, nw 31-27-65w, location. Ojo Exp. Co.'s Ojo 1, 5-29s-69w, dr 159 ft.

LARIMER—Barrow's et al's Barrows 1, se 7-11-68, sd 2310 ft. Deininger et al.'s Remby 1, nw 35-4n-70w, res at 354 ft. Erbe Oil Co.'s Monroe 1, ne 26-11-69w, location.

LAPLATA—McGarr Pete. Corp.'s Red Mesa 1, ne 27-33n-12w, stand 2186 ft. Detroit Oil Ass'n's Olbert 1, se 9-35n-12w, stand 2623 ft.

LINCOLN—Kelly Oil Co.'s State 1, ne 36-14n-57w, dr 3415 ft.

MESA—Argo Oil Co.'s Hoel 1, ne 23-8s-104w, sidetr 2815 ft, total depth 3000 ft.

MOFFAT—Vermillion Oil & Gas Synd.'s 1, se 23-9n-100w, stand 642 ft. Midwest's Hannawalt 24, 4-6n-92w, run cas 2900 ft. Mtn. Fuel Supply's 1, 35-12-101, so water, td 2168 ft. Mtn Fuel Supply's Musser 1, 5-11-97, recem 15½-in. at 1090 ft. S. H. Keoughan et al's State 1, sw 16-4n-101w, dr 1205 ft.

MONTEZUMA—Haller et al's Haller 2s, 33-36n-14w, dr 160 ft.

MORGAN—Ind. Terr. Illum. Oil Co.'s State 1, ne 16-1n-7w, dr 2067 ft.

PARK—So. Park Oil Co.'s Milligan 1, se 13-8s-76w, dr 721 ft.

PUEBLO—Beulah Dome Co.'s Bedland 1, se 13-8s-76w, dr 721 ft.

RIO BLANCO—Texas Prod. Co.'s Potter 1, sw 30-2n-69w, gas at 5987 ft., blow to co Magnolia Pet. Co.'s Fordham 1, sw 9-2s-96w, dr 4935 ft.

ROUTT—Gillespie et al's Omholt 1, se 29-4n-87w, ready to spud.

WELD—Platte Valley Pete. Corp.'s Patterson 1, sw 24-6n-61w, dr 6324 ft.

WASHINGTON—Middlemist Oil Co.'s Middlemist 1, se 14-4s-56w, dr 1260 ft.

MONTANA

CASCADE—Andover Oil Co.'s Floweree 1, se 20-21-2w, dr bel 500 ft.

FERGUS—Melton Corp.'s 1, sw 24-21n-17e, resum at 2700 ft.

GALLATIN—California Co.'s Ringling 1, se 35-5n-7e, dr 5104 ft.

GLACIER—Glacier Oil Co.'s Omsberg 1, nw 35-35-5w, fsg tools lost 1440 ft., td 1700 ft. Kootenai O&G Co.'s 1, 13-35n-6w, sd 700 ft. Fulton Pete. Corp.'s Blackfoot 1, ne 28-36n-12w, mvg in. O'Neill's Michaelson 1, se 28-36-5w, dr 1950 ft. B&H Oil Co.'s Haines 1, se 2-34-6w, dr 200 ft.

GOLDEN VALLEY — Golden Valley Oil Co.'s 1, se 28-6-22, dr bel 1200 ft.

LIBERTY—Square Deal Oil Co.'s Federal Land Bank 1, 1-32n-7e, stand 3565 ft., ready to res, Northland O&G Co.'s Yurman 1, 35-33n-6e, sd 2300 ft., wait cas. Sunburst O&R Co.'s McLaren 1, se 9-37-6e, dr 2200 ft., good gas showing. Utopia Oil Co.'s Eleanor Ass'n 1, sw 11-33-6e, dr 1400 ft.

MUSSELSHELL — Minnesota-Flatwillow's Ivanhoe Dome test, 7-11-31, to res.

PETROLEUM — Minnesota-Flatwillow's 2, 5-13n-25e, ream. to set cas 1840 ft. Oregon-Flatwillow's 1, 3-13n-26e, td 200 ft.

PONDERA—Miller Bros.' Bruins 1, nw 17-28n-1w, rig up.

ROSEBUD—Prairie O&G Co.'s N. P. 1, 9-10n-39e, sd 2310 ft. Prairie's N. P. 3, 26-10-

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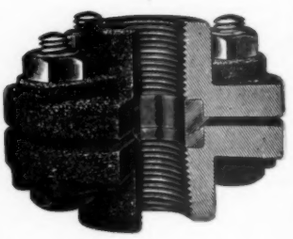

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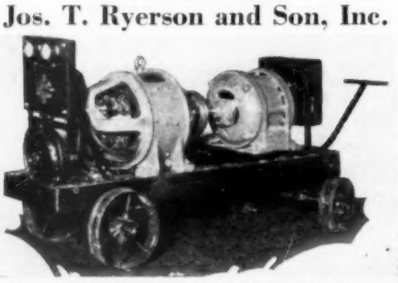

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39e, try to cem off water at 2600 ft. Prairie's N. P. 4, 28-10n-38e, sd 65 ft.

SHERIDAN—Sheyenne O&G Co.'s 1, nw 15-36n-53e, to res at 1400 ft.

TETON—Andover Oil Co.'s Carlson 1, ne 5-24n-4w, td 300 ft. Newman et al's Fitzgerald 1, 26-32n-1w, rig up. Rocky Mtn O&G Co.'s Salmond 1, ne 4-23n-8w, stand 1700 ft. Earl Oil Corp.'s Gad 1, se 22-22n-8w, cem 12½-in at 2006 ft, and dd.

TOOLE—Anaconda Pete. Co.'s Bertholte 1, ne 19-36n-2w, to dd from 1600 ft. John Thomas et al's Buckley 1, ne 1-37-4w, td 1645 ft. Mont. Oil Corp.'s Beaupre 1, se 32-37-1w, dr 1950 ft. Internat'l Roy. Hold. Co.'s Henry 1, se 26-35-3e, show at 1875 ft., fsh tools 2060 ft. Carnege Pete's Rigney 1, se 28-36-4w, dr 2190 ft. Vanalta Oil, Ltd., Peterson 1, sw 22-34-4w, dr 700 ft.

VALLEY—T. P. Jones' 1, nw 31-37-38e, ream to so water 726 ft.

IDAHO

BANNOCK — Norton Bros. et al's Marsh Valley 2, lot 5, 19-10s-37e, water 2465 ft, to run cas to so.

CLARK—Monida Oil Co.'s Beaver Dome 1, nw 32-14n-36e, sd 1360 ft.

POWER—Gem State Pete. Co.'s Arbon Valley 1, nw 2-11s-33e, sd 3800 ft.

TETON—Grand Teton Oil Co.'s Horseshoe 1, se 33-5n-44e, run cas, td 2780 ft. Teton Land & Leasing Co.'s Bevan 3, se 28-5n-44e, fsg 1580 ft.

WYOMING

BIG HORN—P&R's Gov't 3, 24-56-98, bailed hole to 4234 ft. Westland Oil, Inc., 1, 24-54-95, sd 360 ft. Wisconsin Holdings, 4-55-97, sd 665 ft. Yellowstone Pete Co.'s 1, 7-57-97, show 3892-6 ft.

CARBON—C. E. Bivens et al's Haggs 1, 35-13-92, stand 2800 ft. C. E. Bivens' Baggs 2, 36-13-92, location.

FREMONT—Texas Prod. Co.'s State 1, 36-34-95, 8M gas, spray of oil, 4185 ft. P&R's 1, 33-34-92, dr rotary 3437 ft. Premier Oil Co.'s 1, 7-28-92, res at 1911 ft.

HOT SPRINGS—Midwest's Weeks 8, 6-55-98, try form so at 2540 ft. Ohio's Smith 1, 8-46-99, chang to rotary 4403 ft. Gebo Con.'s 1, se 23-44-95, sd for equip't 1375 ft.

JOHNSON—United Oil Co.'s 1, 7-47-92, sd 1700 ft.

LINCOLN—Midwest's Grays River 1, 25-37-117, dr 2080 ft. Mtn Oil Corp., 1, 36-25-115, fsg 815 ft.

NATRONA—Midwest's Midway 1, se 23-35-79, dr 4931 ft. Casper Prod. Co.'s 1, 36-36-11, rig.

PARK—P&R's Pitchfork 1, 14-48-102, dr 3525 ft. Resolute Oil Co.'s 1, 17-27-101, dr bel. 5800 ft. Cody Pete. Co.'s Danker 1, se 22-57-98, swedging 10-in, td 3668 ft. C. M. Johnson's 1, 11-49-102, dr 4208 ft.

SWEETWATER—Vermillion Oil Co.'s 1, se 16-12-99, 10-in cem 2650 ft to test gas.

SHERIDAN—Pfeiffer et al' 6-57-84, location.

WESTON — Gose Synd.'s 1, 28-47-65, res. 4800 ft. Updike et al's Fiddler Creek 1, 11-45-64, dr bel 1200 ft.

NEW MEXICO

DE BACA—Matador Oil Co.'s Wood 1, se 6-4n-20e, res at 3005 ft.

EDDY—Lockhart et al's Parker 2-X, se 3-17s-30e, dr 2750 ft.

LEA—Fisher & Lowrie's State 1, nw 11-18s-36e, dr 5430 ft. Texas-Pacific Coal & Oil Co.'s State 1-G, 24-18s-37e, 8000 bbls at 4215 ft. Texas-Pacific's State 4, nw 21-33s-36e, dr 3890 ft. Hobbs High Oil Co.'s State 1, se 35-18s-38e, stand 2500 ft. Maljamar O&G Corp's Baish 3, nw 21-17s-32w, 200 bbls at 4159 ft. Landreth Prod. Co.'s State 1, 7-18s-38e, dr 3200 ft. Amerada's State 1-A, ne 32-18-38, dr 3725 ft. California Co.'s State 1, se 29-18s-38e, dr 4020 ft. Geo Getty's McKinley 1, ne 30-18-38e, 7000 bbls at 4200 ft. Humble O&R Co.'s Bowers 2-A, 30-18s-38e, dr 3655 ft. Sun Oil Co.'s McKinley 1, ne 5-19s-38e, dr 3610 ft. Shell Pete. Corp.'s State 2, ne 32-18s-36e, dr 3910 ft. Empire's Fowler 1-C, ne 1-18s-38e, 5000 bbls at 4175 ft. Morton et al's State 1, nw 32-11s-38e, dr 5305 ft. Tidal's Coleman 1, ne 17-21s-36e, dr 3820 ft. Continental's Meyer 1, nw 28-22s-36e, ream 3630 ft. Atlantic Oil Prod. Co.'s State 1, ne 5-19s-38e, dr 1265 ft.

McKINLEY—J. W. Halsell's Santa Fe 1, 17-18-9w, dr 3267 ft. Wms. et al's A.T.S.F.

1, sw 19-18n-8w, dr bel. 2135 ft. Walker Dome Oil Co.'s 1, 12-15-10, test at 1012 ft.

RIO ARRIBA—Berringer et al's Hartman 1, ne 8-29n-7w, sd 825 ft. San Juan Pete. Co.'s Gov't 1, sw 14-30n-7w, stand 270 ft.

SAN JUAN—Dorothy Oil Co.'s Terwilliger 2, 29-30-9w, dr 1810 ft. Southern Union Gas Co.'s Day 1, se 20-28n-10w, dr 1765 ft. Childers Dr. & Pr. Co.'s Westwater 2, nw 23-31-16w, sd 2525 ft. Reserve Oil Co.'s Shafer 2, ne 1-21n-14w, sd 780 ft.

SANDOVAL—Mayflower O&G Co.'s Marion 1, se 23-20n-2w, abd 2060 ft.

SAN MIGUEL—Pioneer O&G Co.'s Thunderbird 1, nw 14-15n-16e, wait 2355 ft. Starr Oil Co.'s Adams 1, ne 25-17n-16e, 8¼-in at 3271 ft. Cibola Pete. Co.'s Crown 1, se 9-13n-14e, ready to res 320 ft. Hershfield Dev. Co.'s Cabra Springs 1, ne 21-12n-22e, dr 1175 ft.

SOCORRO — Lockhart & Co.'s Stackhouse 2, 14-3s-6e, dr 2955 ft.

TORRANCE—Williams et al's Staplin 1, ne 16-8n-10e, stand 1643 ft. J. B. Witt O&G Co.'s Kutchem 1, 12-17s-7e, dr 942 ft.

VALENCIA—Rio Puerco Oil Co.'s N. M.-Ariz. Land Co. 2, ne 13-6n-2w, wtg pipe 3145 ft. Acme Oil Co.'s N.M.-Ariz. Land Co. 1, 26-6-3, stand 4741 ft. Harlan et al's Harlan 1, 5-6n-2e, fsg 4330 ft.

KANSAS

MORTON COUNTY — Barrington et al, Creamer 1, c nw 2-35-39w, 10-inch 1405 ft rust. McNabb et al, Rickart 1, c se, 5-35-39w, 8-inch 2546 ft, dr 2630 ft. Argus Gas Co., Irwin 1, c se 10-35-39w, ru.

STEVENS COUNTY—Argus Gas Co., Shaffer 1, c se 6-35-38w, dr 1771 ft.

SUMNER COUNTY—Davidson et al, Strickland 1, sw se, 12-35-1w, rig.

MORTON COUNTY — Hydraulic Oil Co., State land 1, nw se, 22-34-43w, dr 1910 ft. Argus Gas Co., Watson 1, c ne 37-34-40w, dr 2300 ft.

STEVENS COUNTY—Argus Gas Co., Libon 1, c ne 2-34-39w, dr 2315 ft; Dreibelbis 2, c nw 9-34-39w, fsh, td 1896 ft; Thompson 1, c nw 18-34-39w, 8-inch 2478 ft, rust.

MORTON COUNTY—Argus Gas Co., Dorth 1, c ne 20-34-39w, 8-inch 2500 ft, dr 2640 ft.

STEVENS COUNTY—Argus Gas Co., Tillett 1, c sw 21-34-39w, dr 2060 ft.

MORTON COUNTY—Argus Gas Co., Sullivan 1, c nw 29-34-39w, ru.

STEVENS COUNTY—W. Sidwell et al, Kelly 1, sw ne 16-34-38w, td 1600 ft, sd. Argus Gas Co., Knier 1, c sw 27-34-37w, dr 320 ft; Harrison 1, c sw, 30-34-37w, ru.

SUMNER COUNTY—Disney et al, Foy 1, c e½ se 14-34-1w, rig.

MORTON COUNTY—Argus Gas Co., Burton 1, c se, 11-33-40w, 8-inch 2428 ft, rust.

STEVENS COUNTY—Argus Gas Co., Stone 1, c ne, 3-33-39w, 8-inch 2505 ft, dr 2575 ft.

MORTON COUNTY—Argus Gas Co., Mangles 1, c se, 4-33-39w, 8-inch 2527 ft, co; Morgan 1, c se, 6-33-39w, 8-inch 2453 ft, td 2475 ft rust. Argus Gas Co.,Morgan 1, c nw, 8-33-39w, rog; Garner 1, c se, 18-33-39w, 8-inch 2459 ft, rust; Mangels 1, c ne, 20-33-39w, 8-inch 2440 ft, rust.

STEVENS COUNTY—Agate and McNabb, Gregory 1, c nw, 19-33-38w, dr 2450 ft. Argus Gas Co., Ratcliff 1, c se, 8-33-37w, 8-inch 2493 ft, rust.

BARBARA COUNTY—Barbara Oil, Hamblin 1, c sw nw, 24-33-13w, sd 4400 ft.

SUMNER COUNTY—Magnolia, Shriner 1, nw sw, 9-33-2e, dr 1928 ft.

STEVENS COUNTY — McNabb & Mid-Kansas, Rinehart 1, c ne, 23-32-39w, rig. Mangle, Youngren 1, c se nw, 24-32-39w, dr 1623 ft.

BARBER COUNTY—Phillips & Robertson, Powell 1, c se se, 11-32-10w, cem cave, td 4365 ft, ur 6-inch.

COWLEY COUNTY—Tom Fine, Boyd 1, nw ne, 32-32-4e, 12-inch 1265 ft, dr 1755 ft.

STEVENS COUNTY—Fredell Const. Co., Persinger 1, c se, 22-31-38w, dr 535 ft. McNabb et al, Porter 1, c nw, 4-31-37w, dr 595 ft.

HARPER COUNTY—Beeler et al, Bear 1, c ne, 21-31-6w, td 1830 ft, sd.

ELK COUNTY—Croft & Frazier, Keys 1, se ne, 26-31-6w, ru.

KIOWA COUNTY—Phillips-Prairie, Bean 1, ne se, 10-30-17w, dr 3135 ft.

GRANT COUNTY—McKenna et al, Sullivan 1, ne c 12-29-28w, sp and sd.

KINGMAN COUNTY — Slick, Pryor & Lockhart, Wetherall 1, ne sw, 36-29-6w, rog.

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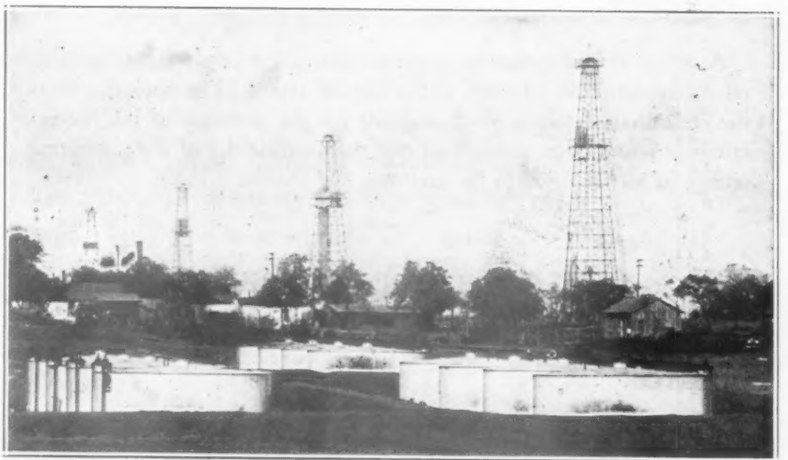

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KIOWA COUNTY—McKenna et al, Ralston 1, c ne 14-28-20w, ru and sd.

BUTLER COUNTY—Alladin Pet., Metzger 1, c nw se, 23-38-3e, Wilcox 2000-18 ft, hfw, sd. Farrell et al, Sutter 1, nw c 18-28-7e, spd.

FORD COUNTY—McNabb et al, Fowler 1, c se, 26-27-22w, td 400 ft, sd.

SEDGWICK COUNTY — Newman, Inc., Bawly 1, c se nw ne 2-27-2e, dr 2305 ft.

GREENWOOD COUNTY—Mallory et al, Denchfield 1, se nw 12-27-9e, dr 1810 ft. F. Konkay et al, Rook 1, nw ne ne 7-27-12e, td 1836 ft, sd.

PRATT COUNTY—Wilcox, Unknown 1, sw nw 7-26-15w, 8-inch 4005 ft, sd.

RENO COUNTY—Valerius, Stevens 1, c ne se ne, 6-26-7w, 6-inch 3600 ft, dr 3770 ft. Tom Palmer & Phillips Pet., Horsch 1, ne se 14-26-5w, dr 3090 ft.

SEDGWICK COUNTY — Travender et al, McLean 1, se sw se, 23-26-1w, td 975 ft, sd.

BUTLER COUNTY—Gypsy, Osborne 1, nw se, 22-26-3e, dr 1360 ft. Pioneer Pet. Co., Crist 1, nw se 33-36-4e, dr 1750 ft. Liggett, Guanther 1, c se ne nw, 29-26-7e, dr 2025 ft.

FORD COUNTY—Swain et al, Kenthorn 1, c nw 21-25-24w, sd 3575 ft.

RENO COUNTY—Shell et al, Popp 1, nw c 11-25-5w, tu.

GREENWOOD COUNTY — Harwood Oil, Loy 1, 20-25-10e, sw ne, dr 710 ft. Staats et al, Swan 1, ne nw 3-25-12e, sp and sd. Bundy-Smith & O'Neil, Ford 1, ne nw 28-25-13e, spd and sd. Mid-Continent, Giess 1, nw sw 33-25-13e, 1623-28 ft, 6 bbls water.

PAWNEE COUNTY—Skelly, Milhouse 1, c se 34-23-17w, T. Viola 4510 ft, 4605 ft hfw, fsh.

RENO COUNTY—Study, Hawry 1, ne sw 1-23-4w, dr 2200 ft.

STAFFORD COUNTY—Midwest, Richardson 36, se c 36-22-12w, td 2838 ft csg trbl, Boucher, Groves 1, ne c 9-22-11w, dr 2200 ft. Boucher, Christensen 1, nw c 22-22-11w, 8-inch 2774 ft, dr 2882 ft.

RENO COUNTY—United Petroleum, Houston 1, nw c 4-22-10w, dr 1750 ft.

COFFEY COUNTY—Ritchey et al, Rassenmacker, c se 36-22-13e, 1940-55 ft hfw, td 2165 ft, sd. Roberts et al, Hay 1, sw se nw, 32-22-15e, dr 950 ft.

McPHERSON COUNTY—Harry Skelly et al, Neufeldt 1, se ne 19-31-3w, rig.

MARION COUNTY—Magnolia, Davis 1, se nw 18-21-2e, dr 740 ft.

RICE COUNTY — Miller and Brown, Schwartz 1, c sw nw sw 10-20-10w, 6-inch 2740 ft, dr 2965 ft. Gypsy et al, Koch 1, 1320 s and 440 w n¼ cor 35-20-9w, 10-inch 1907 ft, rust.

MARION COUNTY—Empire, Hiebert 1, c se sw se 20-10-2e, 8-inch 2670 ft, dr 2800 ft.

RICE COUNTY—Hershey, Golden & Skelly, Brandensteln 1, c sw 10-19-10w, rog. Danciger, Bell 1, c sw 16-19-8w, td 3498 ft, hfw, dr 3530 ft. Hoffine, Lee & Shell, Sled Farm Corp. 1, c sw 33-19-6w, hfw 2260 ft, dr 2475 ft.

MARION COUNTY—Marshall et al, Higgens 1, ne c 33-19-5e, rig.

LYON COUNTY—Griffith et al, King 1, nw c 8-19-10e, 12-inch 910 ft, sd.

RUSH COUNTY—Syndicate Oil, Mohr 1, c sw 2-18-16w, dr 2300 ft. Syndicate Oil, Tannen 1, c sw 11-18-16w, lcn.

RICE COUNTY—Tatlock et al, Ploog 1, c sw se 33-18-9w, 10-inch 2395 ft, dr 2995 ft. McPherson Gas & Shell, Jennings 1, c ne sw nw, 29-18-8w, td 3205 ft, rng 6-inch.

McPHERSON COUNTY—Simmons & Canary et al, Bishop 1, c nw sw 15-19-1w, td 2816 ft, ur 6-inch.

RUSH COUNTY—McPherson, Brack 1, c nw, 24-17-16w, dr 2415 ft.

ELLSWORTH COUNTY — Slick et al, Hecken 1, nw c 24-17-10w, dr 500 ft.

MARION COUNTY — Dixie & Arkansas Fuel, Hacker 1, nw ne 6-17-1e, dr 234 ft.

MIAMI COUNTY—Clark et al, Vaughn 1, se sw, 28-17-22e, dr 1200 ft.

RUSH COUNTY—Prairie, Leiker 1, c nw sw sw, 5-16-13w, dr 473 ft.

BARTON COUNTY—Slick & Prairie, Rude 1, sw c 11-16-3w, dr 1580 ft.

DICKINSON COUNTY—Hiatt & Durham, Wendt 11, nw c 17-16-2e, spd and abn.

MORRIS COUNTY—Urschell et al, Scott 1, ne sw, 6-16-6e, sd 2420 ft. Hankenson et al, Sessnum 1, sw se 24-16-9e, rig.

ELLIS COUNTY—Rush Oil Co., Gatewood 1, nw 4-15-20w, dr 3750 ft.

RUSSELL COUNTY — Streeter & Stearns, Mitchell 1, se c 6-15-14w, dr 485 ft. Empire-Prairie, Ochs 2, se ne 23-15-14w, dr 3270 ft. Slick et al, Bernick 1, se sw 23-15-13w, 8-inch 2808 ft, dr 3195 ft.

DICKINSON COUNTY—Cress et al, Sanden 1, ne c 12-15-2e, abn.

RUSSELL COUNTY—Empire, Herbel 1, c nw ne sw, 26-14-14w, dr 2025 ft.

OSAGE COUNTY—Riggs & Smith, Wood 1, c se nw 21-14-15e, dr 410 ft.

DOUGLAS COUNTY — Steinbushel et al, Unknown 1, sw ne nw 34-14-21e, td 1110 ft, sd.

GOVE COUNTY—Valerius et al, Todd 1, nw c 24-13-27w, dr 1585 ft.

ELLIS COUNTY—Streeter & Stearns, Leiker 1, sw ne 26-13-20w, 6-inch 3567 ft, dr 3650 ft.

RUSSELL COUNTY — Austin Drlg. Co., Rockefeller 1, se c 6-13-12w, dr 774 ft, sd.

SALINE COUNTY—Twin Mounds Oil Co., Weis 1, c w½ ne nw 20-13-4w, dr 1822 ft.

DICKINSON COUNTY—Severs et al, Lerringood 1, ne sw 13-13-2e, td 2205 ft, ur 6-inch. Krooger et al, Dische 1, c nw ne ne 17-13-2e, sd 2943 ft, hfw.

PAWNEE COUNTY—Central Commercial Helms 1, se ne 2-12-20w, 8-inch 2940 ft, td 3140 ft, fsh.

DICKINSON COUNTY — E. H. Morgan, Whitehair 1, nw se 9-12-1e, 6-inch 2525 ft, rng 5-inch 2815 ft.

ELLIS COUNTY—Byrens et al, Fisher 1, nw se 4-11-20w, td 1000 ft, sd.

RUSSELL COUNTY—Gilbreath et al, Bratton 1, c ne 33-11-13w, td 1010 ft, sd.

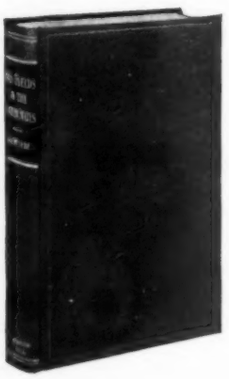
ROOKS COUNTY — Streeter & Stearns, Conger 1, c se nw ne 16-10-16w, sd 250 ft.

GRAHAM COUNTY—Gulf Coast Oil, St. Johns 6, ne sw se, 27-8-25w, 8-inch 4360 ft, td 4370 ft, rust.

CLAY COUNTY—Chrisler, Tivier 1, sw c 19-8-3e, spd and sd.

MARSHALL COUNTY—Swicker & Simcox, Remple 1, c n¼ nw 22-4-9e, td 1000 ft, sd.

WASHINGTON COUNTY — Simcox. Perwell 1, nw se ne 16-3-3e, dr 510 ft.



Oil Fields in the United States

By WALTER A. VER WIEBE

Professor of Geology, University of Wichita

629 pages, 6 x 9, illustrated, $6.00

A complete and systematic presentation of the fundamental facts of oil accumulation in all fields of the United States. The book describes the structural elements which account for the presence of oil, the relation of structure to production and the peculiarities of the geological setting of all oil fields in the country.

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Looking into the Latter Part of 1930

Economists and students of business gauge their estimates of the future in the light of their information on the past and present. What has happened and what is happening plays a most important part in what will happen.

The August 1 issue of *The* OIL WEEKLY, its Mid-Year Statistical and Forecast and European Issue combined, will present to readers of *The* OIL WEEKLY the results of the studies of America's best talent in economics—economics as applied to the oil industry.

Not only will its pages embrace a statistical review of every State of the United States from an oil standpoint, but based on these studies the situation for the rest of the year will be dealt with.

***The* OIL WEEKLY is not a prophet, nor does it include prophets among its staff men, but it does number on its editorial staff one of the best known economists in the oil business, and the culmination of his studies for the first six months of this year will be contained in the August 1 issue.**

Remember the date---

THE OIL WEEKLY, August 1st

McCollum Exploration Co.

Contracts taken for Seismograph Work

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DIVIDEND NOTICE

Imperial Royalties Company

(Established April, 1920)

Will pay a monthly dividend of 18 cents a share on its Class A Preferred, also a dividend of 1½% on its old Preferred, both payable July 30 to shareholders of record July 25.

E. S. Horn, H. O. Bland, J. E. Horn
Trustees
Hunt Bldg., Tulsa, Okla.

ANSWERS

to questions found on page 80

1. Poland is on the verge of a renaissance in oil; Polish engineering societies and operating companies are engaged upon systematic rationalization, modernization, and standardization of their industry.

2. Oklahoma produced 252,000,000 barrels of oil in 1929.

3. Oil Operators, Inc., is a non-profit making company operated by the several major operators at Long Beach, California, which in less than three and a half years has disposed of 60,000,000 barrels of such waste at a minimum cost per operator.

4. Humble Oil & Refining Company was first with 7,359,321 barrels; Gulf Production Company was second with 6,852,880 barrels; and The Texas Company was third with 4,304,651 barrels.

5. Early in May, 1930, Standard Oil Company of California dedicated to the public the use of its system by which explosions on tank ships are made virtually impossible, details of which were carried in the May 16 issue of THE OIL WEEKLY.

6. Rights and privileges include: access to any lease covered, at all reasonable times to inspect the work of development and operation; the right to inspect the logs, samples and cuttings from any and all wells drilled; and the right to inspect and audit, at all reasonable times, the operator's books, records and invoices pertaining to any matter of accounting arising thereunder.

7. Closed gravity gathering systems are the best and most economical. The installation of an efficient gathering system will materially decrease operating costs and evaporation losses and may be instrumental in increasing production, both daily and ultimate.

8. There are five genera! methods of treating emulsions, namely, with heat in open or closed receptacles; with electricity; with chemicals; with centrifuges; and with various combinations of the foregoing.

9. Properties or holdings are classified for purposes of valuation into four principal classes, based on the knowledge of their petroliferous content, as proven, probable, possible, and improbable.

Denver.—Midwest Refining Company's Hannawalt 24 on the Bell Rock structure, west of Craig, Colorado, has shut off the 30,000,000 cubic feet of gas encountered at 2843-2900 feet, and is starting to run casing with total depth 2908 feet. This well will be drilled deeper to the original objective. Finding gas in this horizon was entirely unexpected and has added materially to the value of the Bell Rock area, as well as to other structure in northwestern Colorado near the town of Craig.

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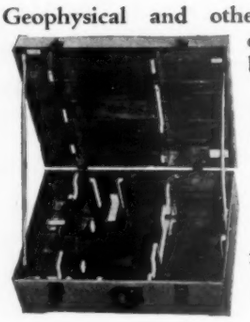

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"Made properly for pipe line construction

particularly for ditching in rough country where the surface is cut up with washes."

That, according to the statement of a Mid-Continent contractor, is why he chose six Buckeye pipe line ditchers in preference to others.

Detailing their service, he states that they are used for "general pipe line trenching. Soils vary from light, sandy loam to extra hard gumbo and loose rock formation. We have ditched through some very rough country, that looked impossible to get a machine over.

"Our best day was made during December, 1929, near Clay Center, Kansas. Our machine cut 6875 feet of 24-inch by 54-inch ditch in 10 hours. However, we have several days that exceeded 1 mile in 10 hours. During January, 1930, one machine cut 8100 feet of 24-inch by 36-inch ditch in 9 hours, with 8 inches of frost in the ground."

Like most Buckeye owners, this contractor uses them exclusively — Ditchers, *Service* Backfillers and *Utility* Backfiller-Cranes. It is just one more instance of a capable organization and dependable equipment forming a profitable, winning combination.

Write for our new catalog, "Buckeye — *The* Pipe Liner." It gives complete specifications, pictures these popular ditchers in action and gives dependable performance data.

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Order Badgett Steam Lubricator Equipment now and end all of your lubrication troubles. Good lubrication, that means money to you, the life of your machinery, the time of your workmen. Badgett special steam lubricators eliminate packing piston rods on engines and pumps. Here are some present users of Badgett Special Steam Lubricators:

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G. E. Gilberth, Oklahoma City.
Golden & Cochran, Wink, Texas.
Haynes Drilling Co., Wink, Texas.
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Steinberg & Yerkee, Seminole, Okla.
Fain-McGaha, Wichita Falls, Texas.
Alleson & Clevinger, Seminole, Okla.
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No other pumping engine has all these fine features!

The Franklin Valveless O. G. Gas Pumping Engine was designed and built with the idea of giving the oil industry the finest gas pumping engine in the world at its price: It has low weight coupled with power ample for swabbing and pulling operations which achieved without sacrifice of strength; 3-point lubrication on the cylinder is positive — removable and reversible bearings. These are only a few of the features, and in addition, should the gas supply weaken or fail, it may be converted in an hour and a half to a fine oil pumping engine.

Consult your nearest Oil Well Supply Store or write us direct for full and complete information.

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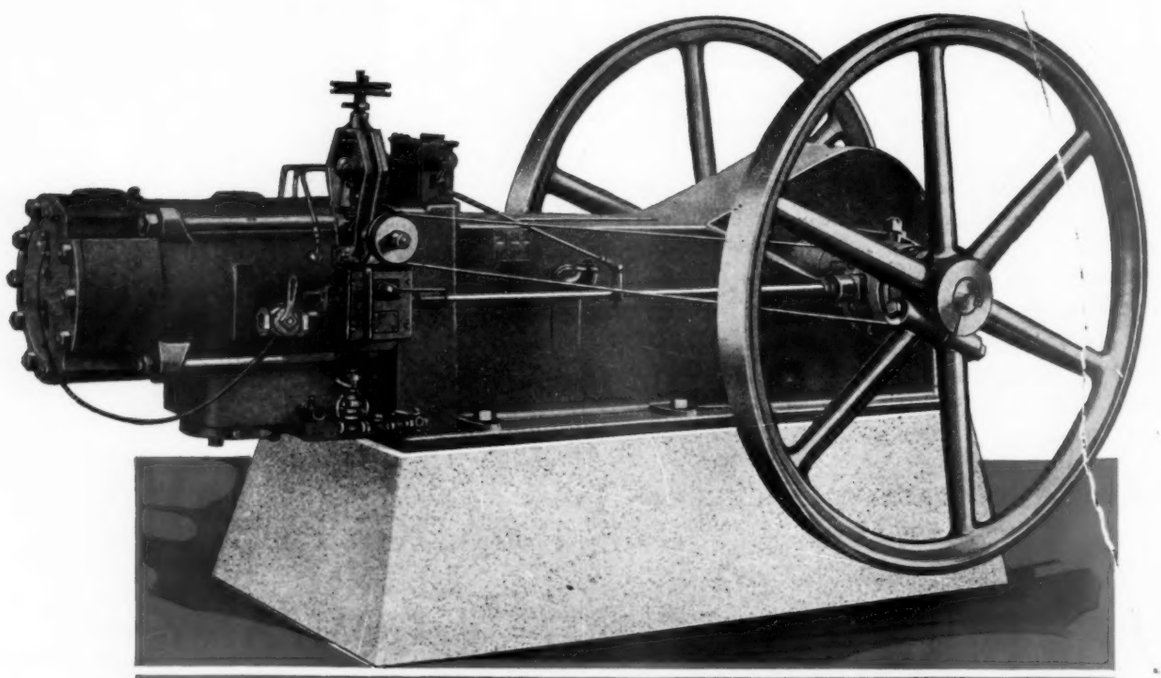

FRANKLIN VALVELESS O.G. PUMPING ENGINE

New Equipment for the Field

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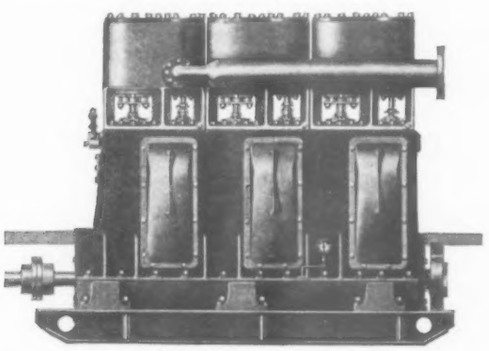
Steam Engine

DOHENY STONE DRILL COMPANY

A high degree of economy and efficiency of operation is claimed for the recently introduced Hydril three cylinder vertical steam engine by its manufacturers, the Doheny Stone Drill Company, makers of Hydril well drilling equipment. While primarily intended to be used as a prime mover for Hydril machinery, the engine is readily adaptable for use with other makes of drilling equipment as well as for other purposes in the oil fields where steam power is required.

It is of the 10 x 10 size, with double acting piston type valves and develops 320 horsepower at 320 revolutions per minute with 150 pounds steam pressure. The triple throw crankshaft with cranks at 120 degrees is a one piece forging and has seven main bearings.



Hydrill Steam Engine

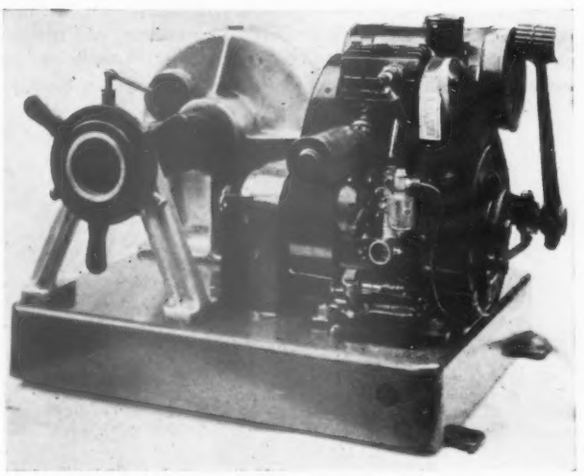
The engine is fully enclosed, yet the design is such that all parts are readily accessible. Machine work is held to rigid standards assuring complete interchangeability of all similar parts. Cylinders are cast separately of grey iron, mounted on separate steel spacers cast integrally with the crosshead guides, making replacement of any one cylinder unit possible without affecting the others.

Lubrication is full force feed, assuring a minimum of wear on moving parts and the greatest dependability of operation. Lubrication of pistons, valves, valve rods and cylinders is accomplished by a separate steam lubricator. Contamination of lubricant in the crank case from leakage of condensate around the piston and valve is prevented by spring wipers placed above the spacer deck about valve and piston rods.

A two position variable cut-off instantly controllable by the operator results in a saving of as much as 26 per cent in steam consumption when normal drilling activities do not require the full power of the engine, at the same time giving full power for hoisting or other work when wanted. Further economy is gained by having the cylinders asbestos lagged.

The Hydril steam engine is exceptionally quiet and smooth running, being practically vibrationless even when handling exceptionally heavy loads. It is characterized by uniform torque and rapid acceleration under load. Being of the vertical type and practically vibrationless it requires less floor space and does not have to be held down with special attachments.

More information may be had by addressing Doheny Stone Drill Company, 714 W. 10th Street, Los Angeles, California.



"Power Boy" with Gasoline Motor

Gasoline Powered Threader

OSTER MANUFACTURING COMPANY

Oster Manufacturing Company, Cleveland, Ohio, has announced the equipment of their well-known No. 412 Power Boy, threading machine, with a gasoline engine drive that will operate for 10 hours on a single gallon of gasoline. Heretofore the machine has had to be operated by electric motor but this new installation makes it more useful because of the inaccessibility of electric current many times.

The gasoline motor is a one horsepower, single cylinder, air-cooled, Briggs and Stratton motor. It is very compact and operates with a minimum of expense to the owner. Equipment of the motor consists of a high tension magneto, motorcycle spark plugs, and an Eclipse motorcycle clutch. The motor is connected to the Power Boy with a roller chain. An equal amount of speed and power efficiency has been produced by the gasoline drive, making it as beneficial as the electric drive.

Manometer Type Instrument

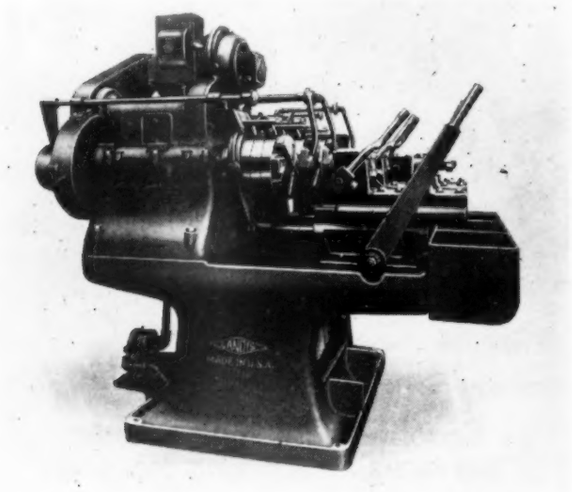
THE MERIAM COMPANY

The Meriam Company, Cleveland, has designed a new instrument of the U-tube type for the purpose of indicating simultaneously the line pressure and rate of flow of liquids or gases in pipe lines. This instrument supersedes the combination type that was on the market last year. The old instrument was very satisfactory but it was necessary to change certain operating features, involving a matter of only a few seconds, in order to get both pressure and rate of flow.

The new instrument is of entirely different construction and uses two liquids instead of one. Red oil and water are ordinarily used unless it is necessary to use heavier or lighter liquids to accord the pressure and flow to be dealt with. Bulbs on the two outer ends have openings which are connected to the pipe line in the same way as the ends of the old flow meter. A riser tube, of a height proportionate to the line pressure to be measured and to the liquid to be used,

is connected to the middle point of the "W," the shape of the new instrument.

Operation of the instrument consists of pouring the heavier liquid into each of the "U" tubes and then pouring the lighter liquid into the riser tube so as to act as a seal. This addition will make the levels of the heavier liquid unequal and sufficient quantity of the lighter liquid is added at the bulb ends to correct this. The instrument is then installed on the pipe line.



Landis Threader for Bolts

Landis Bolt Factory Threader

LANDIS MACHINE COMPANY

Landis Machine Company announces that its triple spindle, high production bolt threading unit has been redesigned to include a constant speed motor drive and a pick-off gear box.

This new device gives the machine 15 threading speeds ranging from 38 to 271 R.P.M. using eight sets of interchangeable gears. The substitution of other gears allows an even greater range of threading speed which gives the machine more efficient capacities from the use of the gear box. Alloy steel shafts in the gear box, lubricated by the Alemite system assure a minimum of trouble under all working conditions. A silent chain connects the constant speed motor to the gear box.

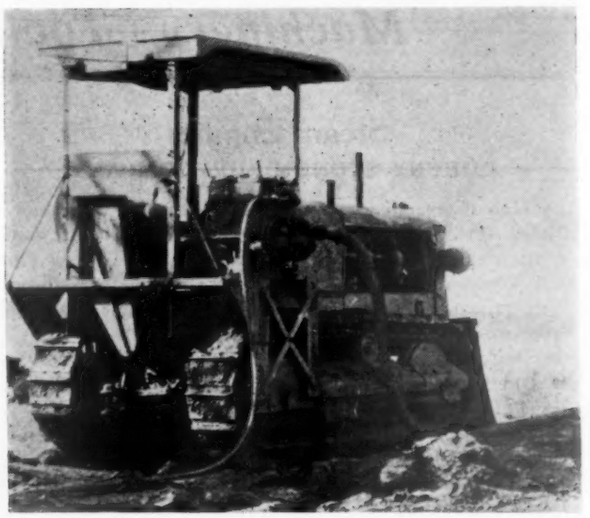
The coolant system has been redesigned to give a larger volume of coolant to the work at all speeds by using a low speed, low pressure, large volume pump, belt driven from a constant speed shaft. The motor driven machine is made in 1" and 1½" triple spindle models.

Tractor Slush Pump

ALLIS-CHALMERS MANUFACTURING COMPANY

When used with a core drilling rig, the Allis-Chalmers Monarch "35" also furnishes power to drive the slush pump. The slush pump is mounted on the rear of the tractor and is driven from the power take-off by a silent chain drive enclosed in a dust-proof case. It runs in a bath of oil. This installation in no way interferes with the tractor drawbar which is left entirely accessible and permits use of the tractor for transporting the rig or for any other hauling which may be required.

In the photograph the tractor and pump are shown be-



Tractor Slush Pump

side the slush pit, connected up, ready for operation. The large hose leading to the slush pit is the suction line from the slush pump. The small hose leading from the pump to the ground is the discharge line and leads to the top of the drill tube in the derrick. The slush pump is a conventional two cylinder pump.

The ability of the track type tractor to negotiate rough fields with ease makes this a useful power unit for oil field exploration. A maximum of 41 horsepower at the drawbar in low gear gives the "35" ample power for transporting the drilling machine, tool wagon and other equipment over the roughest fields encountered.

A wide tread model of the Monarch "35" is built for extremely rough, hilly fields, and a wide track model for swamp lands. Each model can be fitted with the same equipment.

Clark Trucwelder

CLARK TRUCTRACTOR COMPANY

Clark Tructractor Company, Battle Creek, Michigan, is producing the new Clark Trucwelder, a complete arc welding unit which is mobile and is capable of 24 hours' continuous operation. The mobility of the new welder makes it especially useful in fields where electric current is not available.

Power for operating the welder and for moving it are fur-

Clark Truck Welder

nished by the four-cylinder gas engine. Self-exciting General Electric arc welding generators with special drive belts develop the arc welding current. The current ranges from 60 to 250 amperes at 25 volts and has been found suitable for use with all commercial sizes of metallic electrodes.

Changes in the voltage and amperes is controlled by handles on the outside of the generator which move the generator brushes. Operation is facilitated by control from the driver's seat so that the one man can perform the dual task without loss of time.

Wrenches

BLACKHAWK MANUFACTURING COMPANY

Blackhawk Manufacturing Company, 148 Broadway, Milwaukee, Wisconsin, has placed on the market a new set of box type wrenches with improved broaching of the double hex openings and slim heads to get into close quarters and over or under obstructions. This set is chrome vanadium chromium plated and the sizes required are put in a leatherette case.

The 2900 set is made up of six of the single offset type wrenches with the same size socket opening at each end of the wrench. Sizes in this set include the following: 7/16-inch, ½-inch, 9/16-inch, ⅝-inch, 11/16-inch and ¾-inch.

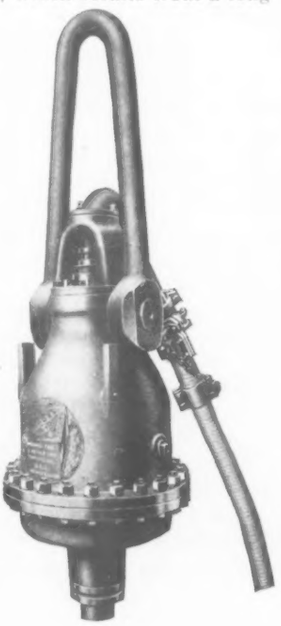
The 2702 set includes the five most popular size wrenches in double hexagons. They are double offset with different openings at each end of the handle. These openings include ⅜-inch, 7/16-inch, ½-inch, 9/16-inch and ⅝-inch. The set is complete in a leatherette roll that fits the pocket.

The manufacturers announce that mechanics may obtain complete information on these sets and other Blackhawk wrenches by writing for the 1930 handy guide for mechanics, a manual on the company's wrenches.

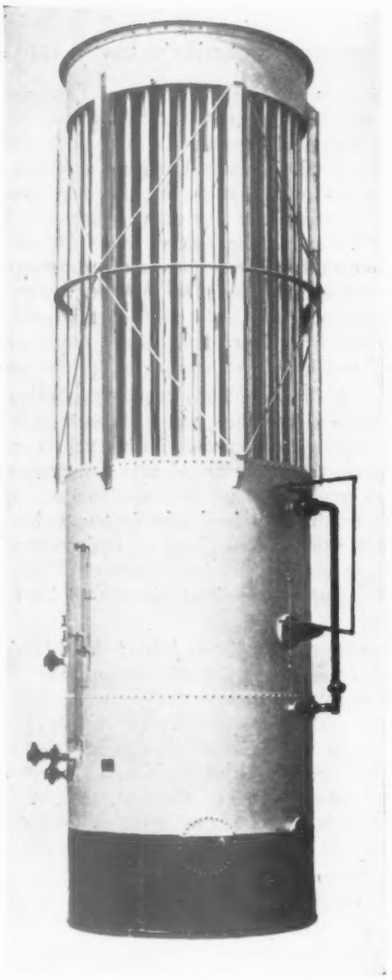
The New Type Swivel

NATIONAL TOOL AND METALS, INC.

National Tool and Metals, Inc., Torrance, Cal., has just announced a new type swivel, which results from a long period of research, design and construction. This swivel, which is shown here, has recently completed thorough field tests prior to being placed on the market. It embodies new bearing construction, the latest engineering design and is built for heavy duty work.



Ash Grove Lime & Portland Cement Company has moved its general offices from the Grand Avenue Temple Building to the new Fairfax Building, located on the southwest corner of Eleventh and Baltimore Streets, Kansas City, Missouri. In this new location the entire eleventh floor will be occupied. District sales offices will continue to be maintained at 1206 Petroleum Building, Oklahoma City.



Tulsa Type Feed Water Purifier and Condenser

TULSA BOILER & MACHINERY COMPANY

Tulsa Type Feed Water Purifier and Condenser ... ..

The Tulsa Type Feed Water Purifier and Condenser has been developed primarily to condense exhaust steam on drilling wells. Increased boiler capacity, muffling of engine exhaust, removal of steam clouds from derrick floor and reduction of boiler troubles has made possible faster drilling at lower costs.

M. J. Harper has recently been appointed to succeed Victor E. Arnold as manager of the New York City office of the Pittsburgh Equitable Meter Company. Mr. Harper is well fitted to fill this position through his experience in handling the export sales of the company for many years, as well as taking care of many important accounts in the New York territory.

Manufacturer and Supply Dealer Notes

Across Country By Truck

Shipping equipment from the factory at Torrance, California, to Houston and Mid-Continent fields by trucks in the remarkable time of three and one-half and four days is being accomplished by D. & M. Machine Company at a cost below rail transportation and with a saving of time over average express shipments. Necessity for immediate shipments to Houston, Oklahoma City and other centers was responsible for the inauguration of this unusual means of transportation, which apparently holds considerable promise in the movement of small oil field equipment from California to distant points. Improved roads and specially equipped trucks have simplified a problem which would not have been considered a few years ago.

Three special four-ton Ford trucks are being used, two operating between Torrance and Oklahoma points and one running exclusively to Houston. Each truck is equipped with six rear wheels, the customary double arrangement on either side and one running behind each combination to give a full margin of strength and safety. Compartments have been built to accommodate the various pieces of equipment without crating. Designing of the truck body to meet exact requirements of the manufacturer has added greatly to the efficiency of the method.

The compartment immediately behind the driver's cab is the home of one driver while the other is on duty. It is a small rectangular room and incorporates various innovations which make for the comfort of the drivers. The bed is built across the middle of the truck and includes an ordinary mattress and an air mattress on top. Running water is piped to the compartment and lights have been installed. A small ice machine will be installed in each truck motor to cool the sleeping quarters. During the day and while crossing the hot stretches between Torrance and the Mid-Continent, more than ordinary ventilation is needed for complete comfort.

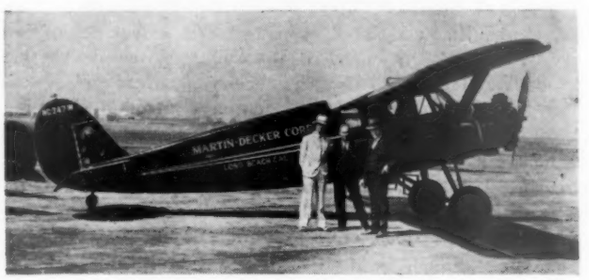
Two men are in charge of each truck, one driving six hours at a time, while the other is sleeping. On such a long trip, the necessity of sleep is obvious and practically the entire off-duty period is consumed in this way.

A typical schedule would show a truck leaving Torrance at 1 a.m. on Monday and arriving at Houston at 3:30 a.m., Friday. The present route includes Fort Worth in the Houston schedule, better roads being traveled the northern route than would be found along the slightly nearer southern route. The Oklahoma schedule requires more time than the Houston trip.

D & M Transcontinental Trucks

One of the advantages in truck transportation is the saving in crating. The equipment is loaded directly into the trucks and taken directly to the company's warehouses, both crating and unpacking being virtually eliminated.

The cost of transportation, including depreciation, is somewhat less than the best rail rates, according to most recent figures. The size of the trucks and the investment are both small, in comparison with the heavy loads carried, four tons on such a conveyance proving a considerable cargo when freight and express rates are calculated.



Martin-Decker Plane

A Stinson Detroiter four-passenger plane recently was purchased by Martin Decker Corporation. The gentleman in white is E. L. Decker, junior member of the firm, while Major Robert Blair, aviator, is in the center. He has had 9000 hours in the air, 2000 hours of which were at the front during the World War. The third in the party is W. R. Martin. The plane is used to visit various fields in the United States.

At a meeting of the board of directors of Mid-Continent Supply Company, held July 7, K. W. Davis was elected president and general manager of the company succeeding C. H. Brown; and D. H. Thornbury was made vice-president to succeed Mr. Davis.

In an effort to place "Function of Natural Gas in the Production of Oil," regarded by engineers as the most valuable reference book ever published on the subject, in the hands of every oil company executive, engineer, geologist, production suprintendent and others directly interested in drilling and production, the American Petroleum Institute is making an additional distribution of 2000 copies.

Some 5000 copies already have been distributed to members of the Institute and placed on the shelves of virtually every university, college and technical school in the country. It now is desired to put the remaining copies in circulation where they will be most useful and they are being offered at a special closing price of $1 each.

The book, written by H. C. Miller, senior petroleum engineer of the U. S. Bureau of Mines, presents the findings of two years of study by technical subcommittees of the Institute's Gas Conservation Committee in non-technical language. In its 253 pages are compiled the experience and opinion of scientists and engineers regarding the importance of natural gas in petroleum production and the best means for its utilization. There are also 36 charts and graphs and 24 tables of summarized data.

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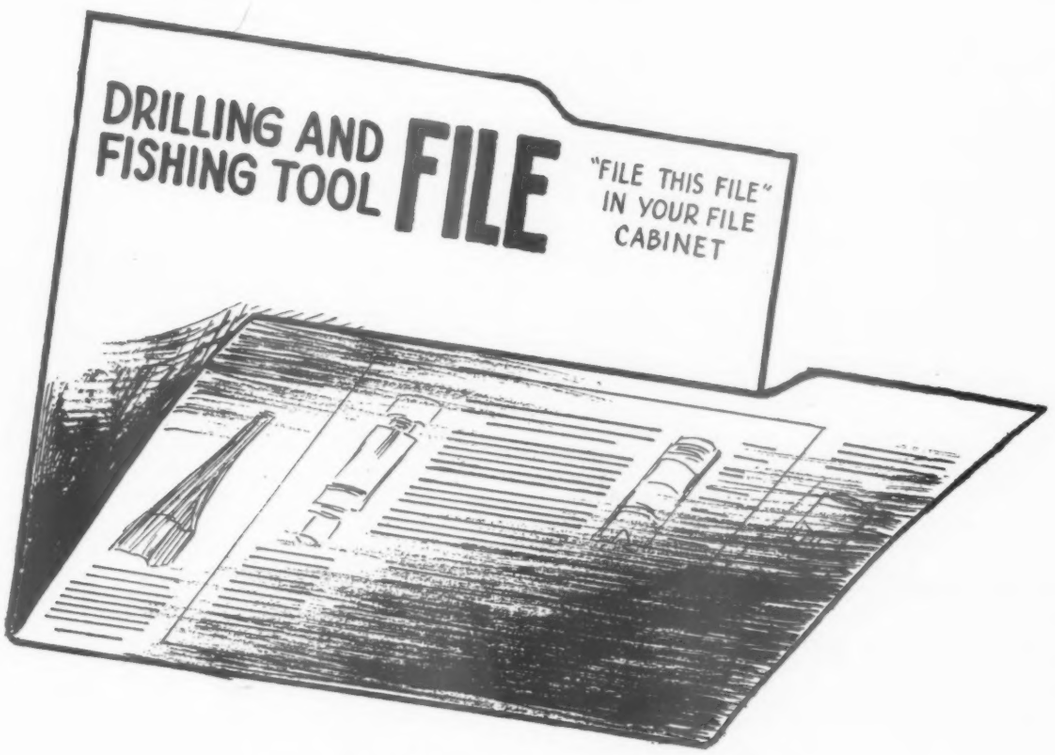

A copy of this file in your file cabinet will save hours of searching when you want information quick.

For the convenience of oil men we have prepared a "DRILLING AND FISHING TOOL FILE."

(1) You will find information on Drilling and Fishing Tool Problems conveniently assembled.

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We trust this file will save you valuable time; that it will draw us closer together when we may be of service to each other.

YOURS FOR THE ASKING

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HOUSTON — TEXAS

GRAY TOOL COMPANY,
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Houston, Texas.

Please send me your NEW "DRILLING AND AND FISHING TOOL FILE"

Name .....

Address .....

SQUEAKS FROM THE BULL WHEEL

Here is a story against himself told by General Charles G. Dawes, now Ambassador at London:

When he (Dawes) was examined for his commission as Lieutenant-Colonel in the Engineering Corps he knew little or nothing about engineering. Asked the question:

"What would you do if you were ordered to survey a field?" he replied:

"I'd send for a surveyor."

And he passed.

Joseph had been sent to bed by his mother for using profane language. When his father came home she sent him upstairs to punish the boy.

"I'll teach that young fellow to swear!" he roared and started up the stairs. He tripped on the top step and even his wife held her ears for a few moments.

"You'd better come down now," she called up after the air had cleared somewhat, "He's had enough for his first lesson."

Sunday School Teacher (giving moral lesson to class)—And what qualities should you ask God to give you as you grow up?.. Truth, honesty and what else?

Wise Child—Sales resistance.

A Scotchman, not feeling so well as usual, called on his family doctor, who looked him over and gave him some pills to be taken at bedtime. Whiskey was also prescribed for his stomach's sake, a small glass to be taken after each meal.

Four days later Sandy again called on the doctor, stating he was feeling no better.

"Have you taken the medicine exactly as I instructed?" the doctor inquired.

"Weel, doctor," replied the patient, "I may be a wee bit behind wi' the pills, but I'm six weeks ahead wi' the whusky."

Two freshmen were called before the dean for having been drunk at fraternity dance.

"Young men," said the dean, "do you realize that you are not living up to our standard?"

"Gosh, dean," said one, "we drank all we could."

"You say that you are the sole support of a widowed mother, your father having recently been killed in an explosion. How did the explosion happen?"

"Mother says it was too much yeast, but Uncle Jim thinks it was too little sugar."

There is a negro laborer who is a powerful preacher and in much demand among the local negro churches. He is considered a man of superior eloquence, and he never uses a word of less than three syllables if he can help int. During the recent prevalence of influenza he called on the local surgeon for treatment.

"Well, elder," said the doctor, "what may be your trouble?"

"It's like unto dis, doctor," he replied. "Endurin de week dat have marked its footprints on de revolvin' wings of time, I have been inflicted wiff a conglomeration of my detestables, which caused de catamounts to rise up in my indigestor, and give me such a hurtin' across my misery dat exchally I beleaf I have congested de epidemic in influwendways."

"Must my husband die on the gallows?"

"Of course not, of course not, lady. All we do is tie the rope around his neck and shove him off. From then on its entirely up to him."

Signs seen in a roadside hot dog stand in California:

Good Old Fashioned
COFFEE
like your mother used to make before she started smoking cigarettes.

Our
MILKMAN
Has a Cow

By mistake Molly sat down on the stove and it was
HOT TAMALE

It is not because she is a photographer's daughter that she is
WELL DEVELOPED
She Eats Here.

Mother, is that a Kingfish?
Yes, dear. Why?
Where are Amos 'n' Andy?

Daddy, I don't think mother knows much about raising children.

What makes you say that?

Well, she makes me go to bed when I'm wide awake and she makes me get up when I am awfully sleepy.

"And how is your poor husband, Mrs. Dorfindinger?"

"Oh, he suffers something awful with his foot, and I know what it's like because I've had it in my eye."

Hello, how's the boy? I just had a plate of oxtail soup and feel bully.

That's nothing. I just had a plate of hash and feel like everything.

A Straight Hole Saves Dollars for the Oil Man

Every experienced oil man knows the savings in dollars that a straight hole brings to him. Less trouble, less time, and less drilling costs accompany a straight hole.

The APPLEMAN GUMBO BIT drills straight holes for less weight is needed to feed this bit.

Pressure at the Bottom

Water courses lead directly to the cutting edge in the Appleman Bit giving you the pressure that quickly breaks up and washes away the cuttings. This is a speed factor, important in fast drilling and a clean hole.

Self-Sharpening Blades

This feature gives speed to your drilling resulting in greater profits from time saved. The blades are shaped so that the sidewall is cut clean and well-built up. The concave shape of the blades with their hard facing, permit wear on the back to retain sharp cutting edges.

Write for Complete Information

B. K. APPLEMAN
BEAUMONT, TEXAS

What is the WASHINGTON STRUCTURAL STEEL DERRICK?

THE Washington Steel Derrick is a really substantial derrick with many advantages that recommend it to new users. It is made of structural steel—of material whose safe loads, stresses, and behavior can be definitely foretold. It is a derrick of known dependability—that has proved its worth for thirteen years.

The Washington Derrick is the result of many years of practical experience combined with the knowledge of expert structural engineers. It is strong and rugged—fireproof — windproof — easily erected and easily removed to new location. An exclusive feature — double spliced joints — makes a socket that holds the legs while bolting up. Not only that, but it is the most nearly perfect structural steel derrick joint.

The Washington is not a cheap derrick but it is an economical one — first and last. Its purchase is an investment in long life, exceptional portability, reduced fire hazard and quick erection, dismantling and re-erection.

If the number of wells to be drilled with a single outfit is of considerable importance to the purchaser of derricks, the Washington will deserve careful consideration. Correctly designed, they will drill more than an average number of wells per derrick and will be found superior in their super-rigidity.

O'Brien Steel Construction Company, Inc.
Washington, Penna.

Western Representative:
RIG EQUIPMENT CO., 1524 So. St. Louis St., Tulsa, Okla.

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O. H. Steel Boiler Tubes
Armco Ingot Iron Boiler Tubes
Cop-R-Loy Boiler Tubes

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WASHINGTON, PA.

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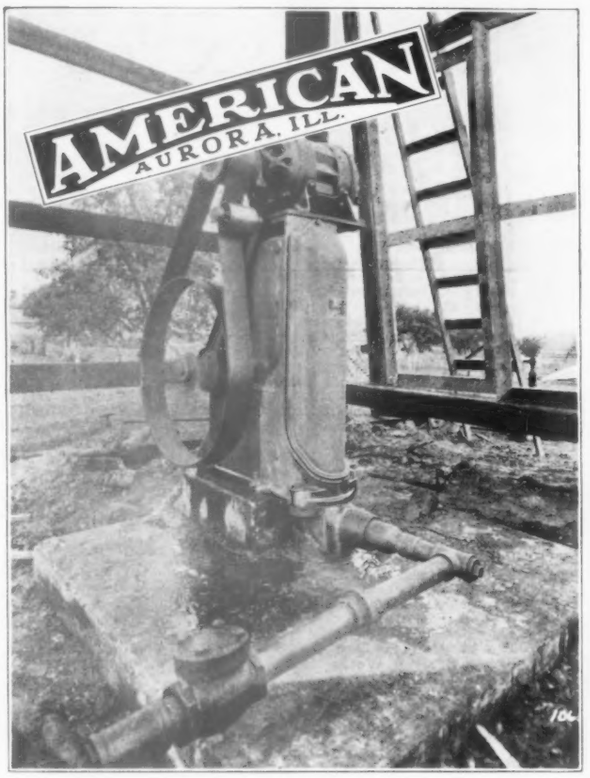
ARMCO IRON LINE PIPE and OIL WELL TUBING



AN "AMERICAN" OUT ON THE JOB

Here is a 3150 foot well pumped by a No. 4-A "American" oil well pumping unit. Powered with a 5 H.P. motor, it's on the job twenty-four hours a day.

"American" pumping units are equipped for either belt or direct drive. The working parts are few in number and the accurately machined gears and pinions are oil immersed. All bearings, except two, are automatically lubricated. The machine is heavy, compact and well balanced; and gives a perfect straight lift to the polish rod. It is easy to install and easy to counterbalance. Special mulehead and cable sling protect the well in case of sanding.

"American" pumping units are furnished in six sizes with strokes from 12″ to 50″. All machines are available for immediate shipment.

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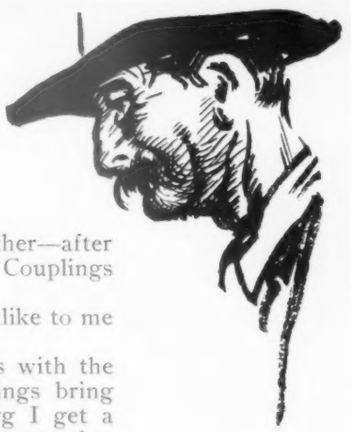
"Ordinary Couplings don't suit me"



"And they won't suit you either—after you've tried Harrisburg Couplings awhile.

"All couplings used to look alike to me too—but not any more!

"Why should I take chances with the 'tough breaks' ordinary couplings bring when by specifying Harrisburg I get a coupling produced by a company that controls every phase of its manufacture from steel making to finishing?"

"You can't think of any good reason.

"Well, neither can I. That's why it's Harrisburg for mine!"

HARRISBURG PIPE AND PIPE BENDING COMPANY

HARRISBURG, PA.

Fully Equipped with Our Own Open Hearth Furnaces, Rolling Mills and Forge Shops.

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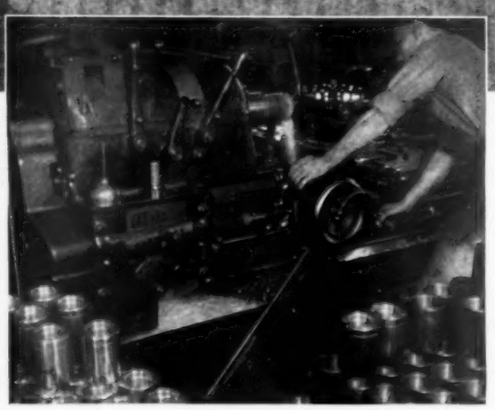
FORGED SEAMLESS STEEL COUPLINGS



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AXELSON

PUMP COLLAR

A PERFECT COUNTERPART!

Even the collars of Axelson Interchangeable Liner Pumps receive the same care and precision in milling and threading as is exercised in the finishing of the fine internal parts. Axelson gages, noted for their extreme accuracy and manufactured to the high Axelson standards, are used for gaging and checking the collars.

The top and bottom collars of Axelson Pumps are made from special bar steel and are turned to size in automatic machines. As a convenience in identification the exterior of the collars are grooved with 1 to 3 grooves, indicating the type of thread supplied.

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